

**OU4 REMEDIAL EXCAVATION DESIGN STATEMENT OF
WORK**

PHASE 1

EIGHTEEN MILE CREEK SUPERFUND SITE

LOCKPORT, NEW YORK

100% DESIGN

Prepared for:



U.S. Environmental Protection Agency

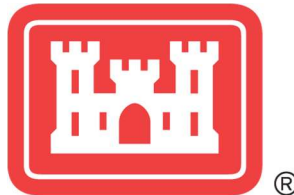
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Appendix B Arboreal Survey Data for OU4 Properties

ABBREVIATIONS AND ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACGIH	American Conference of Governmental Industrial Hygienists
AHA	activity hazard analysis
AM&ST	Air Monitoring and Sampling Technician
ANSETS	Analytical Services Tracking System
ANSI	American National Standards Institute
API	American Petroleum Institute
APP	Accident Prevention Plan
AQS	Air Quality Specialist
ARAR	Applicable or Relevant and Appropriate Requirement
ASTM	American Society of Testing Materials
AWG	American Wire Gauge
AWWA	American Water Works Association
CBC	complete blood count
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CO ₂	carbon dioxide
COE	Corps of Engineers
CQC	Contractor Quality Control
CQCSM	Contractor's Quality Control System Manager
CRZ	contamination reduction zone
CSP	Certified Safety Professional
cy	cubic yard
DER	Division of Environmental Remediation
DFW	definable feature of work
DOD	U.S. Department of Defense
DOT	Department of Transportation
DP	Demolition Plan
DQO	data quality objective
DSL	digital subscriber line

EDD	electronic data deliverable
EPA	United States Environmental Protection Agency
ERRS	Emergency and Rapid Response Services
ERT	USEPA Environmental Response Team
EZ	exclusion zone
ft ²	square feet
FEV	forced expiratory volume
FIO	for information only
FVC	forced vital capacity
GSS	Guideline Specifications for Sodding
HTRW	Hazardous, Toxic, and Radioactive Waste
HVAC	heating, ventilation, and air conditioning
lbs	pounds
LDR	Land Disposal Restriction
LFL	lower flammable limit
LHBH	L.H. Bailey Hortorium
mg/kg	milligrams per kilogram
N-P-K	nitrogen-phosphorous-potassium
NARA	U.S. National Archives and Records Administration
NAS	network analysis
N ₂	liquid nitrogen
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIOSH	National Institute of Occupational Safety and Health
NTP	Notice to Proceed
NYCRR	New York Codes, Rules, and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
O.D.	outside diameter
OLEM	Office of Land and Emergency Management
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
OU1	Operable Unit 1
OU2	Operable Unit 2

OU3	Operable Unit 3
OU4	Operable Unit 4
PAMP	Perimeter Air Monitoring Plan
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PFAS	Per- and Polyfluoroalkyl Substances
PM	Project Manager
PM10	Particulate Matter
PPE	personal protective equipment
PRG	preliminary remediation goal
PSD	prevention of significant deterioration
psi	per square inch
UFP-QAPP	Uniform Federal Policy for Quality Assurance Project Plans
QA	quality assurance
OC	quality control
RA	Remedial Action
RAO	Remedial Action Objective
RAP	Remedial Action Plan
RD	Remedial Design
RDS	Remedial Design Specification
RI	Remedial Investigation
ROD	Record of Decision
RSPA	Research and Special Programs Administration
SAR	sodium adsorption ratio
SESC	Soil Erosion and Sediment Control
SHM	Safety and Health Manager
SPPEs	State Pollutant Discharge Elimination System
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SS	Site Superintendent
SVOC	semi-volatile organic compound
SWPPP	storm water pollution prevention plan
SZ	safe zone
TAL	target analyte list

TBC	To Be Considered
TCL	target compound list
TDC	Transportation and Disposal Coordinator
TLV	threshold limit value
TMECC	Test Methods for the Examination of Composting and Compost
TPI	Turf Grass Producers International
TSCA	Toxic Substances Control Act
US	United States
USC	United States Code
UST	underground storage tank
VOC	volatile organic compound

SECTION 1.0 INTRODUCTION

This Remedial Design Specification (RDS) addresses the implementation of the selected remedy presented in U.S. Environmental Protection Agency's (EPA's) Record of Decision (ROD), dated September 2018 (EPA, 2018b), for Operable Unit 4 (OU4) of the Eighteen Mile Creek Superfund Site (Site), in Niagara County, New York (NY). The OU4 remedy was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 United States Code (U.S.C.) §§ 9601-9675, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations Part 300. The New York State Department of Environmental Conservation (NYSDEC) was consulted on the proposed remedy in accordance with Section 121(f) of CERCLA, 42 U.S.C. § 9621(f), and concurs with the selected remedy. The remedial action (RA) described in this RDS targets a discrete portion of the Site involving contaminated soil at residential properties in the vicinity of the former Flintkote Company Plant (Flintkote) property in the City of Lockport, NY. The EPA's Environmental Response Team (ERT) maintains the following document repository for the RA at the Site: https://ertims.ert.org/site/site_profile.aspx?site_id=825

The residential lead RA will be executed as a phased approach, whereby, additional properties may be added for soil remediation as future risk sampling is conducted and assessed. This document provides the overall remedial approach for Phase 1, the original group of 28 properties outlined in the ROD and three additional properties included thereafter. This specification document will be the design basis for Phase 1. The Site is shown on Figure 1.

The major components of the selected remedy for the contaminated soil at the residential properties in OU4 include the following:

- Excavation of approximately 14,000 cubic yards (cy) of lead-contaminated soil that exceeds EPA's cleanup levels, from 31 properties in the vicinity of the Flintkote property (Figure 1);
- Transportation of the contaminated soil for proper off-site disposal, with treatment as necessary;
- Backfilling of the excavated areas with clean fill; and
- Restoration in-kind of the affected properties after backfilling.

The remediation of the OU4 Site includes the following major components in their anticipated order of occurrence: premobilization activities, mobilization and site preparation, utility clearance, property remediation, property restoration, and demobilization.

OU4 should be considered the priority OU to have remediation completed first, but all other OUs can be worked concurrently.

1.1 REMEDIAL ACTION OBJECTIVES

Remedial Action Objectives (RAOs) are specific goals to protect human health and the environment. These objectives are based on available information and standards such as applicable or relevant and appropriate requirements (ARARs), to-be-considered (TBC) guidance, and site-specific risk-based levels.

The following RAOs have been established for OU4:

- Prevent potential current and future unacceptable risks to human receptors resulting from direct contact (e.g., ingestion) with contaminated soil.
- Prevent migration of site contaminants from the OU4 properties to other areas via overland flow and air dispersion.

PRELIMINARY REMEDIATION GOALS

To achieve the RAOs, EPA has identified a soil cleanup goal, or Preliminary Remediation Goal (PRG), for the contaminated soil to attain a degree of cleanup that ensures the protection of human health and the environment. The two-tiered PRG is based on the New York State's 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 Residential Soil Cleanup Objective for lead and EPA Region 2's lead strategy consistent with Office of Land and Emergency Management (OLEM) Directive 9200.2-167. The following two-tiered PRG has been identified for OU4:

- Lead: 400 milligrams per kilogram (mg/kg); and
- In addition to targeting detections of lead above 400 mg/kg, the average soil concentration across each residential property will be at or below 200 mg/kg.

EPA does not anticipate impact to groundwater is an issue for this OU, given the lead concentrations found and the fact that the contamination is primarily located in the top two feet of soil.

LIMITS OF WORK

The limits of work include impacted areas and the limits of contamination within the excavation areas as indicated on the design drawings. The Government shall be notified immediately if contamination continues beyond the excavation areas indicated on the design drawings. Contractor shall not excavate beyond the limits indicated on the drawings without prior approval from the Government.

ACCESS AGREEMENTS

The Contractor shall satisfy the requirements of all access agreements for the work obtained by the Government.

WORK PLANS

The Contractor shall develop the work plans referenced in this document and in the Eighteen Mile Creek OU1/OU2 specifications for all work at the Site.

SUBMITTALS

See Section 24.0 SUBMITTAL PROCEDURES.

PERMITS AND APPROVALS

The Contractor shall obtain the necessary permits and approvals from applicable federal, state, and local regulatory agencies to execute the project. The Contractor shall be responsible for all fees related to

permits/authorizations issued with regards to the work completed and waste transportation by the Contractor.

Below is a summary of permit equivalencies and approvals that have been identified as being required for the work at the site.

Authority	Permits/Approval	Responsibility
Niagara County Soil and Water Conservation District	Approvals for soil erosion and sediment control (SESC) plan	Contractor
New York Department of Environmental Conservation	401 Water Quality Certification	EPA
New York Department of Environmental Conservation	State Pollutant Discharge Elimination System Permit	EPA
USACE Buffalo District	Nationwide Permit 38 – Cleanup of Hazardous and Toxic Waste	EPA
City of Lockport	Construction/Excavation/Demolition permit	Contractor

The following are some additional permit equivalencies or approvals the Contractor maybe required to obtain:

- a. Street closure/traffic pattern alterations/detours;
- b. Local utility approvals; and
- c. Street curb cut

The Contractor shall be required to comply with all terms and conditions of these and any other permits provided by others.

TEMPORARY FACILITIES

The Contractor shall provide all temporary facilities, as needed, in accordance with the requirements in Section 5.0 TEMPORARY CONSTRUCTION FACILITIES AND UTILITIES.

SPILL PREVENTION AND CONTROL

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES, Paragraph 1.17

SECURITY - GENERAL

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 53 SECURITY

PRE-WORK CONFERENCE AND PROGRESS MEETINGS

Contractor shall attend all meeting and conferences and perform all activities associated with such meetings and conferences in accordance with the requirements of Eighteen Mile Creek OU1/OU2 Specification SECTION 01 31 17 PRE-CONSTRUCTION AND PRE-WORK CONFERENCES and SECTION 01 31 19 PROJECT PROGRESS MEETINGS.

CONTRACTOR QUALITY CONTROL

The Contractor is responsible for quality control and shall establish and maintain in effective quality control systems as specified in Section 21.0 CONTRACTOR QUALITY CONTROL and Eighteen Mile Creek OU1/OU2 Specification SECTION 01 45 16 CONTRACTOR QUALITY CONTROL.

PROJECT PHOTOGRAPHS AND VIDEOS

The Contractor shall take photographs and video documenting project conditions and progress in accordance with the requirements of Eighteen Mile Creek OU1/OU2 Specification SECTION 01 32 33 PROJECT PHOTOGRAPHS AND SECTION 01 32 36 VIDEO MONITORING AND DOCUMENTATION.

Prior to construction, the interior and exterior of homes shall be video recorded in the presence of the property owner and shall include complete coverage of the structure to document the pre-construction condition of each room, especially the areas which will be affected by construction, the location and condition of interior walls (basement foundation walls and interior partition walls), mechanical equipment, pipe penetrations, etc. The Contracting Officer shall designate all locations.

ENVIRONMENTAL PROTECTION

Protect human and natural environments during demolition, excavation, and restoration in accordance with Eighteen Mile Creek OU1/OU2 Specification SECTION 01 57 19 ENVIRONMENTAL PROTECTION.

HISTORICAL AND ARCHAEOLOGICAL RESOURCES

If during construction the Contractor discovers any archaeological or historical items, cease excavation in that area and notify the Government immediately. Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 57 19 ENVIRONMENTAL PROTECTION.

OCCUPANCY OF PREMISES

Building(s) will be occupied during performance of work under this Contract.

Before work is started, arrange with the Government a sequence of procedure, means of access, space for storage of materials and equipment, and use of approaches.

RELOCATION

See Section 6.0 RESIDENT RELOCATION.

EXISTING WORK

In addition to protecting existing vegetation, structures, equipment, utilities, and improvements, the Contractor shall:

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Government. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

LOCATION OF UNDERGROUND UTILITIES

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 11 00 SUMMARY OF WORK, paragraph 1.5.14, SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES, paragraph 1.23, SECTION 02 61 13 EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL, paragraph 3.1, SECTION 02 10 00 SITE PREPARATION, Paragraph 3.4, SECTION 31 00 00 EARTHWORK, Paragraph 1.8.3, and SECTION 33 51 39 MONITORING WELLS, paragraph 3.1.

NOTIFICATION PRIOR TO EXCAVATION

Notify the Contracting Officer at least 10 days prior to starting excavation work.

CLOSEOUT SUBMITTALS

Prepare as-built drawings, record drawings, and Remedial Closeout Package in accordance with the requirements of Eighteen Mile Creek OU1/OU2 Specification SECTION 01 78 00 PROJECT CLOSEOUT and SECTION 01 78 39 PROJECT RECORD DOCUMENTS.

For OU4 a remedial closeout package is documentation of remedial activities for each property. The closeout package shall also contain administrative records for substantial completion and for final acceptance of each property, certification of decontamination of all equipment, cleaning of the project site, and inspections and acceptance from homeowners regarding personal property.

SECTION 2.0 SITE BACKGROUND

SITE LOCATION AND DESCRIPTION

The Site, Superfund Site Identification Number NYN000206456, is located in Niagara County, NY and includes contaminated sediments, soil, and groundwater in and around the Eighteen Mile Creek (Creek). The selected remedy described herein addresses a discrete portion of the Site involving contaminated soil at residential properties in the vicinity of the former Flintkote property on Mill Street (Figure 1). The EPA is the lead agency for the Site, and the NYSDEC is the support agency. The Site is currently a fund-lead site.

The headwaters of the Creek consist of an East and West Branch which begin immediately north of the New York State Barge Canal (Canal). Water from the Creek's East Branch originates at the spillway on the south side of the Canal, where it is directed northward underneath the Canal and the Mill Street Bridge through a culvert. Water from the West Branch originates from the dry dock on the north side of the Canal and then flows northward. The East and West Branches converge just south of Clinton Street in Lockport and then flow north beneath Clinton Street on the former United Paperboard Company (United Paperboard) property. There is a dam located in the Creek behind the United Paperboard building, referred to as the Clinton Street Dam, and the ponded water behind the dam is commonly referred to as Mill Pond. On the Flintkote property, the Creek splits and forms the Millrace, which is a small segment of the Creek that splits and flows around an area of soil and fill on the Flintkote property, known as the Island. The Creek flows north for approximately 15 miles and discharges to Lake Ontario in Olcott, New York.

EPA has divided the Site into separate phases, called Operable Units or OUs, for remediation purposes. OU1 is addressing the risks associated with the residential soil contamination at nine residential properties located on Water Street as well as the threats posed from the deteriorating buildings at the Flintkote property. OU2, referred to as the Creek Corridor, is addressing the contaminated soil at the following properties: the United Paperboard property, the former White Transportation (White Transportation) property, the Flintkote property, and Upson Park. OU2 also addresses sediment contamination within the Creek Channel, which is defined as the sediment within the discrete Creek Corridor section of the Creek; an approximately 4,000-foot segment of the Creek that extends from the Canal to Harwood Street in the City of Lockport. OU3 will address the groundwater within the Creek Corridor, as well as contaminated sediments in the Creek that are not addressed by OU2, namely those from the end of the Creek Corridor to its location of discharge into Lake Ontario in Olcott, New York. OU4, the subject of this RAP addresses lead-contaminated soil at certain residential properties on Mill Street and several other adjoining residential streets east of the Flintkote property in the City of Lockport, New York. A Site location map is provided as Figure 1. Most of the yards associated with the properties have lawn, landscaping, and impervious surfaces that include driveways, sidewalks, and patios.

SITE OPERATIONAL HISTORY

The Flintkote property is approximately six acres in size and consists of two adjoining parcels at 198 and 300 Mill Street (Figure 1). The Flintkote property housed many different operations, beginning as a sawmill in the early 1830s. In 1884, the Lockport Paper Company was established at the property. In 1928, the Beckman Dawson Roofing Company purchased the property and began manufacturing felt and felt products. In 1935, the Flintkote Company began production of sound-deadening and tufting felt for installation and use in automobiles. Manufacturing of this product line continued until December 1971, when operations ceased, and the plant closed. The disposal history of the site is largely unknown. However, aerial photographs suggest that by 1938, fill was disposed in the section of 300 Mill Street between the

Creek and the Millrace in an area known as the Island. The nature of the fill material at that time is unknown.

SITE GEOLOGY

The topsoil in the OU4 area is described as a dark-brown silty soil with varying amounts of natural organic matter. Some of the topsoil also contains varying amounts of fill that consists of ash, glass, coal, slag, concrete, wood, plastic, porcelain shards, and brick. Glacial deposits, consisting of silts and clays with varying proportions of sand and gravel, underlie the fill followed by bedrock. The focus of the remedial investigation (RI) conducted to date in OU4 has not exceeded a depth of 4 feet and neither groundwater nor bedrock have been encountered in any of the RI boreholes.

PREVIOUS REMEDIAL INVESTIGATIONS

In March 2013, EPA initiated a remedial investigation (RI) at residential properties on Water Street (OU1) to supplement an investigation performed by NYSDEC in 2002. As part of EPA's OU1 RI, five additional surface soil samples were collected in the public rights-of-way in front of residential properties along Mill Street opposite of the Flintkote property. Analytical results of these five soil samples did not reveal elevated levels of polychlorinated biphenyls (PCBs). However, lead was detected in all five Mill Street soil samples, and two out of the five Mill Street soil samples revealed lead concentrations ranging from 420 to 470 mg/kg (EPA, 2018b).

In June 2013, EPA conducted a second sampling event in accordance with the *Superfund Lead-Contaminated Residential Sites Handbook* (USEPA, 2003) at two Mill Street properties with elevated lead levels to evaluate whether the results of the March 2013 sampling were representative of the lead concentrations in soil at these properties. The results of the June 2013 sampling revealed levels of lead at one of the properties that exceeded the EPA risk-based screening level. The property had a maximum concentration of lead of 1,800 mg/kg and an average concentration of lead in the surface soil that exceeded 400 mg/kg, which was the risk-based screening level for lead in residential soil at the time (EPA, 2018b). In September 2013, EPA issued a ROD for OU1 to address nine residential properties along Water Street while indicating there was a need for further evaluation of the Mill Street soil sampling results.

RESULTS OF EPA'S OU4 REMEDIAL INVESTIGATION

In 2016, in order to determine if the lead found in the soil samples from the previous investigation was related to the Site, EPA collected additional samples from certain Mill Street properties and the Flintkote property and performed a comparative forensic evaluation. The results of the analysis confirmed that the contaminated soil found on the Mill Street residential properties was related to contamination found on the Flintkote property. EPA also evaluated historical aerial photographs of the OU4 area, but this did not yield further evidence of fill from the Flintkote property being deposited at the residential properties.

To delineate the extent of the Flintkote-related lead contamination, EPA Region 2 and its contractor, Weston, used a phased approach and started with three separate residential soil sampling events in July, September, and November of 2017 at a total of 27 properties (P002 to P005, P021 to P043). This early phase of lead soil sampling utilized a combination of discrete and risk-based soil sampling practices to determine properties eligible for remediation. EPA issued the RI Report (EPA, 2018a) for OU4 in July 2018, which provided the analytical results of soil sampling conducted in 2016 and 2017 to characterize the nature and extent of contamination at this OU. The results of the sampling revealed generally shallow lead contamination at varying concentrations with no distinct pattern of areal distribution at 26 of the 27 residential properties sampled. The results indicated a wide range of lead concentrations from 11 to 1,610 mg/kg, which may indicate the presence of hot spots. Many of the properties showed lead contamination in the surface soil from 0-2 inches and 2-6 inches. Most of the properties also showed elevated

concentrations of lead contamination in the soil from 6-18 inches, which is indicative of fill material being placed on the property. This fill material is believed to be related to the Flintkote property.

As indicated in the OU4 Proposed Plan dated July 2018, EPA performed additional soil sampling in June 2018 at four residential properties (P044 to P047) to further delineate the extent of contamination at this OU. The results of the June 2018 soil sampling revealed elevated concentrations of lead in shallow soil at two of the four properties. Concentrations of lead in soil at these properties ranged from 20 to 1,240 mg/kg (EPA, 2018c). The analytical results of the June 2018 sampling were provided in the OU4 RI Report Addendum.

After the ROD was issued in September 2018, EPA Region II (EPA R2) initiated EPA's Environmental Response Team (ERT) to continue the soil sampling and generate a Remedial Design (RD). ERT utilized its Scientific, Engineering, Response and Analytical Services (SERAS) contract to perform remedial design sampling at 14 properties (P048 through P061) in May/June 2019 and 12 properties (P062 through P074) in September 2019 to further characterize the extent of the OU4 contamination. The results of the May/June and September 2019 soil sampling indicated elevated concentrations of lead in shallow soil at 19 of 26 properties. Concentrations of lead in shallow soil at these properties ranged from 21 to 1,100 mg/kg and continued to reveal no distinct pattern of areal distribution.

Once ERT began its Site operations in 2018, it performed two distinct soil sampling procedures: discrete delineation soil sampling and five-point composite risk-based soil sampling. The delineation sampling serves two objectives: determines the lateral and vertical extent of the lead soil contamination and provides in-place post excavation compliance sampling as to NYSDEC's soil regulations. The risk-based soil sampling determines remediation eligibility for a property. ERT maintains all of its Site-related soil data in a specific Scribe database file.

Supplementary soil sampling to facilitate a remedial design was conducted at OU4 properties in November 2018 and April, June, September 2019. Discrete samples were collected from within the quadrants where lead concentrations in soil exceeded the PRGs at 39 properties. Concentrations of lead in those samples ranged from 1.3 to 2,900 mg/kg. Discrete samples were also collected along selected sidewalls of quadrants where lead concentrations in soil exceeded the PRGs at 25 properties. Concentrations of lead in those samples ranged from 7.3 to 6,100 mg/kg.

Lead concentrations from soil sampling conducted during EPA's remedial investigations at OU4 are tabulated in Appendix A.

SECTION 3.0 PROJECT ORGANIZATION / MANAGEMENT

The stakeholders involved in this project include the homeowners and tenants, regulators, the USEPA Region 2, the USACE, and their excavation contractor including its subcontractors/consultants, and the public.

3.1 EPA

EPA Region 2 is the lead regulatory agency. The OU4 Site falls under the EPA Superfund program. The excavation contractor will coordinate to the extent required with the USEPA and will acquire necessary permits in accordance with EPA regulations.

3.2 ERT AND SERAS

ERT and Scientific, Engineering, Response, and Analytical Services (SERAS) personnel were responsible for remedial design sampling of additional OU4 properties and for preparing this remedial excavation design specification document for OU4. They will continue to perform remedial design sampling at additional OU4 properties, as directed by EPA R2.

3.3 USACE

United States Army Corps of Engineers (USACE) personnel were responsible for preparing the remedial design package – which included updating the additional sampling locations at several OU4 properties, updating the remedial design, and specifications. USACE will be assisting EPA to select a prime contractor for this project.

3.4 CONTRACTOR

EPA with the help of USACE will select a Contractor for this project. Contractor's onsite personnel are responsible for complying with the requirements of this RDS, the Accident Prevention Plan (APP), and the Site Safety and Health Plan (SSHP). The Project Manager (PM), Site Superintendent (SS), the Site Safety and Health Officer (SSHO), and Contractor's Quality Control System Manager (CQCSM) are responsible for onsite implementation of the plans and for ensuring that all work requirements are enforced. Responsibilities for each role should be referenced in the Eighteen Mile Creek OU1/OU2 Specifications, including but not limited to,

- Site Superintendent: SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES, SECTION 01 35 55 PERIMETER AIR MONITORING, and SECTION 01 45 16 CONTRACTOR QUALITY CONTROL.
- SSHO: SECTION 01 31 10 JOB SITE ADMINISTRATION, SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES, and SECTION 01 78 00 PROJECT CLOSEOUT.
- Project Manager: SECTION 01 31 10 JOB SITE ADMINISTRATION, SECTION 01 32 01 PROJECT SCHEDULE, and SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES.
- CQCSM: SECTION 01 31 10 JOB SITE ADMINISTRATION

SECTION 4.0 WORK RESTRICTIONS

4.1 PERSONNEL ENTRY APPROVAL

The Contractor must obtain permission from the Government prior to entering any privately owned property.

4.2 WORKING HOURS

Refer to Eighteen Mile OU1/OU2 specification 01 31 10 JOB SITE ADMINISTRATION, paragraph 3.4.

4.3 UTILITY CUTOVERS AND INTERRUPTIONS

Reference Eighteen Mile Creek OU1/OU2 Specifications

- SECTION 01 11 00 SUMMARY OF WORK, paragraph 1.5.14
- SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES, paragraph 1.23
- SECTION 02 61 13 EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL, paragraph 3.1 and paragraph 3.3.1
- SECTION 02 10 00 SITE PREPARATION, Paragraph 3.4
- SECTION 31 00 00 EARTHWORK, Paragraph 1.8.3
- SECTION 31 50 00 EXCAVATION SUPPORT AND PROTECTION, Paragraph 1.7.1
- SECTION 33 51 39 MONITORING WELLS, paragraph 3.1.

4.4 NOISE CONTROL

The Contractor shall meet the noise control requirements of the Town of Lockport Code, Chapter 123, Noise, to minimize impact to residences adjacent to the site property and as specified in the Eighteen Mile Creek OU1/OU2 Specifications. The Town of Lockport Code, Chapter 123 is provided below.

Chapter 123. Noise

[HISTORY: Adopted by the Town Board of the Town of Lockport 12-3-2003 by L.L. No. 6-2003. Amendments noted where applicable.]

GENERAL REFERENCES

Dogs — See Ch. 80.

Vehicles and traffic — See Ch. 182.

Off-road vehicles — See Ch. 187.

§ 123-1. Declaration of policy.

It is hereby declared to be the policy of the Town Board to prevent unreasonably loud, disturbing and unnecessary noise. It is the intention of the Town Board to maintain reasonable noise levels within the Town of Lockport so as to preserve, protect and promote the public health, safety and welfare and to foster convenience, peace and quiet within the Town by the inhabitants and transients within the Town of Lockport. The Town Board finds that every person is entitled to have maintained noise levels which are not detrimental to life, health, comfort or the ability to sleep and to have the enjoyment of property and that excessive and unreasonable noise within the Town of Lockport affects and is a menace to public health, safety, welfare and comfort of the people of the Town.

§ 123-2. Title.

This chapter shall be known as the "Noise Control Law of the Town of Lockport."

§ 123-3. Noises prohibited.

- A. No person shall cause or permit to be caused any noise which can be heard by a person with normal hearing beyond the boundaries of property owned, leased or otherwise controlled by him, or upon which he is located, that shall unreasonably disturb, alarm or interfere with the comfort, repose or peace of other persons.
- B. No internal combustion engine shall be operated at any time or place in the Town of Lockport without an adequate muffler designed and manufactured to suppress exhaust noise or in such a manner that the noises emitted therefrom shall unreasonably disturb, annoy or interfere with the comfort, repose or peace of other persons.
- C. No dog owner or other person harboring or having custody or control of any dog or dogs in the Town shall permit or allow such dog or dogs to engage in ongoing, habitual, frequent or continuous howling, barking, whining or crying or other noise which shall unreasonably disturb, annoy or interfere with the comfort, repose or peace of any person off the premises where the dog or dogs are harbored or the owner resides.[1]
[1] *Editor's Note: See also Ch. 80, Dogs, § 80-3.*
- D. No person shall maintain or operate any radio, record player, tape recorder, musical devices or instruments or other device designed for the creation, broadcast or emission of music or other sounds at such a level that the noise emitted therefrom shall unreasonably disturb, annoy or interfere with the comfort, repose or peace of any person not on the premises on which such device is located.
- E. No person shall engage in construction or demolition activities which emit noise audible on any premises containing a residence between the hours of 7:00 p.m. and 7:00 a.m., provided that, in the event of emergency or extreme circumstances necessitating such work, the Building Inspector may issue a permit authorizing an exception to this subsection subject to such conditions as he shall determine.

§ 123-4. Penalties for offenses.

A violation of this chapter is an offense punishable by a fine of not more than \$250 or by imprisonment for a period of not more than 15 days, or by both such fine and imprisonment.

§ 123-5. Construal of provisions.

- A. The provisions of this chapter shall not be construed so as to deny or abridge the substantive rights of persons as guaranteed by the New York State or United States Constitutions or statutes.
- B. Section 123-3A and B of this chapter shall not be construed to prohibit any activity of any person engaged in an agricultural activity as an occupation.

Operation of heavy motor vehicles during the construction phase of the project must also comply with 6 NYCRR Part 450.3 – Allowable Noise Levels.

SECTION 5.0 TEMPORARY CONSTRUCTION FACILITIES AND UTILITIES

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND UTILITIES.

SECTION 6.0 RESIDENT RELOCATION

Each property shall be assessed on a case-by-case basis by the Government with input from the Contractor to determine if relocation of residents is necessary. Relocation may be necessary as a result of temporary utility service disruption or if remediation work is required directly adjacent to the residential structure to a depth that may compromise the safety of occupants. If resident relocation is required due to utility service disruption, the Contractor shall provide temporary utilities to the property as necessary. The Government shall prepare formal agreements for relocation, provide temporary living arrangements, and sign leases for temporary housing, if needed. The time from residents being notified about relocation to the actual relocation is about 60 days.

Relocation times and other resident inconveniences are of significant concern to the EPA. Every effort shall be made to minimize these inconveniences and facilitate the quick return of residents to their homes. Once excavations are backfilled, residents may return to their homes.

The current design does not anticipate any residents to be relocated.

SECTION 7.0 AIR MONITORING AND SAMPLING

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 55 PERIMETER AIR MONITORING and SECTION 01 35 29 SAFETY, HEALTH, AND EMERGENCY RESPONSE PROCEDURES, paragraph 1.15.

7.1 WORKER EXPOSURE AIR MONITORING

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 29 SAFETY, HEALTH, AND EMERGENCY RESPONSE PROCEDURES, paragraph 1.15.

7.2 PERIMETER AIR MONITORING

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 55 PERIMETER AIR MONITORING.

Action Levels

The Contractor shall perform remediation in a manner such that ambient air quality objectives at the excavation perimeter are achieved in accordance with the action levels presented in Table 1 and as presented in the Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 55 PERIMETER AIR MONITORING, Table 01 35 55-1. The action levels presented in Table 1 are minimum levels. The exact site-specific requirements shall be determined during development of the PAMP and APP/SSHP. The action levels and required actions shall be presented in the PAMP in both text and tabular form in accordance with Table 1. The Contractor shall notify the Government every time a community action level is exceeded as well as mitigating actions taken.

Table 1
Perimeter Air Monitoring Action Levels

Analyte	Action Level ⁶	Frequency per location ^{2,3}	Analytical Method	Action Required
Background Site Perimeter - Upwind				
Real Time Respirable Dust (PM10)	None	Continuously during the work day, and for 1 hour before and after. Log 15-minute averages.	Direct Reading dust meter with data logger	None
Air Sampling: PM10	None	Two days per month	EPA-IO-2.1 (PM10)	None
Site Perimeter -Downwind⁵				
Real Time Respirable Dust (PM10)	TBD ^{1, 4} - but not to exceed 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) ¹ (15 minute) 100 $\mu\text{g}/\text{m}^3$ (work shift) ¹	Continuously during the work day, and for 1 hour before and after. Log 15-minute averages.	Direct Reading dust meter with data logger	First Instance: Evaluate engineering controls, implement dust control. After an Hour: The above steps plus Stop Work and notify EPA. Resume work after EPA acceptance.
Air Sampling: PM10	Upwind plus 150 $\mu\text{g}/\text{m}^3$	Two days per month	EPA-IO-2.1 (PM10)	Compare to real-time particulate monitoring

				results. Review the real-time action levels and reduce them as necessary. Evaluate dust-generating operations. Implement more stringent measures as appropriate.
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Notes:

1. Ambient concentrations, over background. See Appendix 1B in DER-10 for allowable fugitive dust levels.
2. Frequencies listed in the table are for active construction periods. The EPA may modify this frequency.
3. Sampling shall comply with EPA protocols and shall achieve detection limits to demonstrate compliance with action levels.
4. Action Level to be determined by Contractor, approved by EPA, and documented in PAMP based on maximum lead concentrations in soil.
5. Three locations (2 downwind measurements, and between active zone and nearest residence or receptor).
6. Total dust and compound-specific action levels are evaluated using data corrected for upwind values.
7. One up wind location will be monitored.

SECTION 8.0 SITE PREPARATION AND DEMOLITION

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 02 10 00 SITE PREPARATION and 02 41 00 DEMOLITION. Contractor will perform the following activities conjunction with each resident, the Government, and local utility owner/operators:

- Review each access agreement. Access agreements to each property will be provided by the Government. The Contractor shall maintain copies of the access agreements on site during the construction phase of the project. The Contractor shall obtain an access agreement with the owner of the proposed laydown and staging area.
- Conduct a pre-mobilization briefing with the property owner. Along with the EPA, Contractor shall meet with each property owner and review the access agreement as well as the planned scope-of-work that impacts the property.
- Document concerns the resident may have related to site preparation, demolition, excavation, and restoration activities scheduled for the property.
- Complete a Pre-mobilization checklist with the property owner. The Pre-mobilization checklist documents the property condition and property inventory. Copies of the Pre-mobilization checklist signed by the property owners shall be maintained on-site and also forwarded to the Contracting Officer.
- Contact Dig Safely New York at least three days prior to the start of demolition/excavation to schedule a public utility location service to locate and mark subsurface utilities.
- Schedule a third-party utility locate contractor to verify marked utility locations as well as identify other subsurface features on the property.
- Inventory, remove and store occupant property incidental to site preparation.
- Conduct asbestos and lead paint survey/abatement (if applicable for structures to be demolished).
- Complete site survey and excavation layout.

Contractor shall proceed with site preparation once pre-mobilization documentation is in place and each property owner has been updated on the construction schedule. The general approach to the remedial activity performed at each property shall not vary significantly from property to property. Site preparation includes concrete walkways and patios demolition, asphalt demolition, fence and tree/shrub removal, and demolition of physical structures on site such as sheds and decks, etc.

8.1 DEMOLITION PLAN

The Contractor shall prepare a demolition plan in accordance with the requirements of the Eighteen Mile Creek OU1/OU2 Specification SECTION 02 41 00 DEMOLITION.

A summary of the work approach is presented below:

- Work shall not be initiated without review of the Property Access Agreement.
- Work shall not be initiated before conducting the premobilization interview with the property

owner and receiving the signed Pre-mobilization checklist.

- Private property contained in structures scheduled for demolition shall be inventoried by Contractor and stored off-site.
- Asbestos and lead-based paint survey shall be completed for structures scheduled for demolition and potential risks mitigated.
- Site subsurface utilities shall be marked and verified by the third-party utility locate service.
- Construction equipment size shall be limited to access driveways and private property front, side and back yards. The equipment profile shall include rubber tracked small/medium sized excavators and rubber tracked skid-steer.
- Site preparation shall be executed from the back of the property working toward the front and sides of the property.
- Debris shall be direct loaded and transported to the project laydown and stockpile area for loadout and final disposition.
- Traditional site preparation production rates may be scaled back based on the necessity to: protect private property (dwelling structures) not included in the site preparation plan; minimize impact to adjacent property not included in the project scope-of-work; conduct work safely in tight work-areas; minimize dust production, and safely/cleanly load out demolition debris.
- Site preparation and demolition equipment shall be decontaminated on site prior to departing the property. Work areas shall be protected at the end of each shift with orange construction fencing and yellow "Caution" tape. Site security shall be provided by the Contractor, as needed.

SECTION 9.0 CLEARING AND GRUBBING

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 31 11 00 CLEARING AND GRUBBING.

SECTION 10.0 SURVEYING

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 71 23 SURVEYING

Contractor shall prepare topographic maps of each site property included in the RA, property boundary surveys, impacted streets, and utilities prior to site disturbance. The Contractor shall submit each property map to the Government at least 30 days prior to the start of work on that particular property. Initial Site Drawings must be prepared by a New York State licensed Surveyor.

10.1 INSPECTION

Existing Conditions

Contractor shall verify and define the existing conditions, contours, and location of structures within the construction limits, and as defined on the Contract Drawings, for use and inclusion in the Excavation and Material Handling Plan as defined in Section 11.0 EXCAVATION.

10.2 SURVEY REQUIREMENTS

Initial Site Drawings

Contractor shall prepare topographic maps of site properties, property boundary surveys, impacted streets, and utilities. The Contractor shall submit each property map to the Government at least 30 days prior to the start of work on that particular property. Initial Site Drawings must be prepared by a licensed Surveyor.

Final Excavation Drawings

Contractor shall prepare and submit within 30 days of completion of excavations a topographic map of the excavation depths. Contractor shall provide in-place excavation volume and all calculations to verify the In-Place Volume Calculations. The Contractor shall submit a Surveyor Quantities Certification signed and sealed by the Surveyor stating the accuracy of quantities excavated. A licensed Surveyor shall be used for Final Excavation Drawings.

Sample Locations

Contractor shall prepare and submit within 10 days of completion, maps showing the location of all sample locations including any excavation and post-excavation confirmatory samples.

Final Sample Location Drawings

Prepare and submit within 10 days of completion, maps showing the location of all sample locations including excavation and documentation.

SECTION 11.0 EXCAVATION

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 02 61 13 EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL AND 31 00 00 EARTHWORK. Note Paragraph 1.5 in SECTION 02 61 13 refers to the OU1/OU2 remediation goals, which are not applicable for OU4. See Section 1.2 in this document for the OU4 remediation goals.

Activities during this phase of the project include mass excavation, on-site handling and loading of excavated material, transporting material to the stockpiling area, constructing, covering, monitoring, and maintaining the on-site stockpiles. At this phase of the project, pre-mobilization, mobilization, and site preparation activities shall have been executed and utility identification/protection activities accomplished. Prior to physical excavation activities (physical removal of debris created in site preparation and removal of in-situ soil) on private properties the Contractor shall confirm that the following elements are completed:

- Access agreements have been reviewed by the project team, are current, and are available on site.
- Pre-mobilization briefing documentation is current and available on site.
- The property owner has been updated on the construction schedule relative to the specific property and documentation of any resident concerns has been reviewed by the Field Team.
- Air monitoring equipment and personnel are in-place in accordance with the approved PAMP.
- Site utilities are properly marked and protected.
- Site work/excavation limits have been delineated.

11.1 GENERAL REQUIREMENTS

Field Measurement Data

Contractor shall submit collected field measurement data to the Government as part of a Remedial Unit Closeout Package Report for each property. This Remedial Unit Closeout Package Report shall contain data collection forms, maps, soil sample collection forms, soil sample analyses, surveying data, calibration sheets, quality control (QC) checklist cover sheets and Record Drawings.

Excavation, Restoration, and Material Handling Plan

Contractor shall submit an Excavation, Restoration, and Material Handling Plan to the Government for approval prior to the Pre-Work Conference. The Plan shall describe the methods and procedures for excavation of contaminated material; restoration of each property; debris decontamination procedures; procedures for working near, removing, and replacing utilities and trees; and methods, materials, and procedures for backfilling, compacting and grading; and include design details for on-site stockpiling areas. Adverse conditions may be encountered during excavation operations and provisions should be made for such events.

The Excavation, Restoration, and Material Handling Plan shall address each of the residential areas separately, detailing the additional field sampling performed, if required, excavation limits, work sequence, impacted site features (i.e., aboveground swimming pools, stairs, decks, sheds, sidewalks, driveways, etc.),

volume estimates, tree and shrub removal and replacement, features to be demolished and replaced (including construction details), and features to be relocated. Sections addressing specific excavation areas can be submitted for approval separately or together. The plan shall include a form for documentation of discussions with the homeowner and Government regarding the final restoration plan for each property prior to initiation of excavation activities. Cut sheets for replacement items shall be provided as well as a conceptual figure showing items to be demolished and items to be replaced. The restoration plan shall include a detailed landscaping plan which describes the type, number, and location of replacement plantings, as well as a description of seeded and sodded areas. When excavating next to the foundation of a residential house the contractor shall hand dig to a depth of 6" 1 foot out from the foundation and then slope down to the design depth.

Subsurface Data

Subsurface soil boring locations drilled during the RI are shown on the property drawings. These borings were taken for the purpose of determining contamination limits, and do not describe geotechnical conditions of the site.

SECTION 12.0 BACKFILL AND COMPACTION

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 31 00 00 EARTHWORK, SECTION 01 35 45 CHEMICAL DATA QUALITY CONTROL and SECTION 32 92 19 LOAMING AND SEEDING in addition to the requirements below.

Following excavation at each of the project properties, the Contractor shall make an effort to backfill in a manner that leaves an open excavation at these locations for a limited amount of time. Prior to the start of backfilling, fill material shall be analyzed and approved for use on site prior to transportation and delivery.

Construction equipment size shall be limited to access driveways and private property front, side and back yards. The equipment profile shall include rubber tracked small/medium sized excavator, rubber tracked skid-steer to transport place and compact imported fill material, and a remote-control walk-behind compactor. Placement of fill material shall proceed from the front of the property working toward the sides and back of the property. The heavy equipment utilized to place and compact backfill and handling equipment shall be decontaminated on site prior to departing the property. Work areas shall be protected at the end of each shift with orange construction fencing and yellow "Caution" tape. Site security shall be provided by the Contractor, as needed.

12.1 SOIL MATERIALS

Crushed Stone for Gravel Pipe Bedding

Material shall be well-graded, clean, durable, crushed gravel or crushed stone obtained from a source approved by the Government. Material shall be free from shale lenses, metallic ores and all deleterious material. Contractor shall submit a sample and a gradation of the material three weeks prior to the time of intended use. Crushed stone or gravel bedding shall meet the following gradation:

Sieve Size	Percent Passing by Weight
1 inch	100
1/2 inch	90 to 100
1/4 inch	0 to 15
No. 200	0 to 1.0

Subbase Course (Road Gravel)

Subbase material shall be used for restoration of all paved areas including access roads, parking lots, shoulders, roadways, and gravel trench drain. Subbase material shall be sound and shall be accepted on the basis of a magnesium sulfate soundness loss after 4 cycles of 20 percent or less. Subbase material shall consist of stone, sand, and gravel or blends of these materials with the following gradation:

Sieve Size	Percent Passing by Weight
3 inch	100
2 inch	90 to 100
1/4 inch	30 to 65
No. 40	5 to 40
No. 200	0 to 10

12.2 BURIED WARNING AND IDENTIFICATION TAPE

Contractor shall use polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. The Contractor shall provide tape on rolls, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.

Warning Tape Color Codes

Red:	Electric
Yellow:	Gas, Oil
Orange:	Telephone and Other Communications
Blue:	Water Systems
Green:	Sewer Systems

Warning Tape for Metallic Piping

Contractor shall use acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 pounds per square inch (psi) lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.

Detectable Warning Tape for Non-Metallic Piping

Contractor shall use polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Contractor shall encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

12.3 DETECTION WIRE FOR NON-METALLIC PIPING

Detection wire shall be insulated single strand, solid copper with a minimum of 12 American Wire Gauge (AWG).

Buried Tape and Detection Wire

Buried Warning and Identification Tape

Contractor shall provide buried utility lines with utility identification tape. The Contractor shall bury tape 12 inches below finished grade; under pavements and slabs, Contractor shall bury tape 6 inches below top of subgrade.

Buried Detection Wire

Contractor shall bury detection wire directly above non-metallic piping at a distance not to exceed 12 inches above the top of pipe. The wire shall extend continuously and unbroken, from manhole to manhole. The ends of the wire shall terminate inside the manholes at each end of the pipe, with a minimum of 3 feet of wire, coiled, remaining accessible in each manhole. The wire shall remain insulated over its entire length. The wire shall enter manholes between the top of the corbel and the frame, and extend up through the

chimney seal between the frame and the chimney seal. For force mains, the wire shall terminate in the valve pit at the pump station end of the pipe.

12.4 FINISHING

The surface of excavations, embankments, and subgrades shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown. Contractor shall provide a smooth transition between adjacent existing grades and new grades. The Contractor shall cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances. Contractor shall slope grades to direct water away from buildings and to prevent ponding. The degree of finish for graded areas shall be within 0.1 foot of the grades and elevations indicated except that the degree of finish for subgrades shall be within the following tolerances:

Lawn or unpaved area	+ or - 1 inch
Walks	+ or - 1 inch
Pavements	+ or - 1/2 inch

The finished subgrade shall not be disturbed by traffic or other operation and shall be protected and maintained by the Contractor in a satisfactory condition until ballast, subbase, base, or pavement is placed. No subbase, base course, ballast, or pavement shall be laid until the subgrade has been checked and approved, and in no case shall subbase, base, surfacing, pavement, or ballast be placed on a muddy, spongy, or frozen subgrade. Gutters and ditches shall be finished in a manner that shall result in effective drainage. The surface of areas to be turfed shall be finished to a smoothness suitable for the application of turfing materials. Settlement or washing that occurs in graded, topsoiled, or backfilled areas prior to acceptance of the work, shall be repaired and grades re-established to the required elevations and slopes.

Grading Around Structures

Areas within 5 feet outside of each building and structure line shall be constructed true-to-grade, shaped to drain, and shall be maintained free of trash and debris until final inspection has been completed and the work has been accepted.

12.5 TESTING

The following number of tests, if performed at the appropriate time, shall be the minimum acceptable for each type of operation.

In-Place Densities

- a. One test per 500 cubic yards or fraction thereof, of each lift of fill or backfill areas compacted by other than hand-operated machines (no less than one sample per lift).
- b. One test per 300 square feet, or fraction thereof, of each lift of fill or backfill areas compacted by hand-operated machines.
- c. One test per 25 linear feet, or fraction thereof, of each lift of backfill for roads.
- d. One test per 10 linear feet, or fraction thereof, of each lift of backfill for railroads.
- e. Minimum of one test per property per feature as identified in Paragraph General Compaction is required.

Check Tests on In-Place Densities

If ASTM D 2922 is used, in-place densities shall be checked by ASTM D 1556. Contractor shall perform one check test per day at a location approved by the Government.

Displacement of Sewers

After other required tests have been performed and the trench backfill compacted to the finished grade surface, the pipe shall be inspected to determine whether significant displacement has occurred. This inspection shall be conducted in the presence of the Government. Pipe sizes larger than 36 inches shall be entered and examined, while smaller diameter pipe shall be inspected by shining a light or laser between manholes or manhole locations, or by the use of television cameras passed through the pipe. If, in the judgment of the Government, the interior of the pipe shows poor alignment or any other defects that would cause improper functioning of the system, the defects shall be remedied as directed at no additional cost to the Government.

SECTION 13.0 WASTE TRANSPORTATION AND DISPOSAL

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 02 81 00 MATERIAL HANDLING, TRANSPORTATION, AND DISPOSAL.

A brief summary of the work approach is presented below:

- Construction equipment size shall be limited to access driveways and private property front, side and back yards. The equipment profile shall include rubber tracked small/medium sized excavators, rubber tracked skid-steer, and moderately sized (12 cubic yard [cy]) dump trucks to remove debris and contaminated soil.
- Material handling and load-out of debris shall be from the back of the property working toward the front and sides of the property.
- Debris shall be direct loaded and transported to the project laydown and stockpile area for loadout and final disposition.
- Once debris removal is completed Contractor shall begin excavation activities as prescribed by the contract documents and shall collect any confirmation soil samples, if required, as described in the UFP-QAPP.
- Material handling and loadout of soil shall be from the back and sides of the property and progress toward the front of the property over the course of the work.
- Contaminated soil load-out shall proceed as described above with the exception of where access to the specific work area by the dump-truck is limited. In these cases, smaller, incrementally staged stockpiles shall be created by the excavation process and a second machine (skid-steer loader) shall load the dump trucks.
- Materials removed from the site shall be transported to the lay-down area and stockpiled for disposition.
- Site excavation and handling equipment shall be decontaminated on site prior to departing the property. Work areas shall be protected at the end of each shift with orange construction fencing and yellow "Caution" tape. Site security shall be provided by the Contractor, as needed.

13.12 WASTE MINIMIZATION

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 57 19 ENVIRONMENTAL PROTECTION, paragraph 3.6 and SECTION 02 81 00 MATERIAL HANDLING, TRANSPORTATION, AND DISPOSAL.

Disposal of any trees impacted by Emerald Ash Borer shall be performed in accordance with NYSDEC regulations (https://www.dec.ny.gov/animals/45409.html#For_the_Wood_Products_Industry).

SECTION 14.0 ASPHALT AND CONCRETE REPLACEMENT

Following the completion of backfill activities, the initial site restoration activities shall include asphalt and concrete replacement. During the asphalt pavement replacement, a base course, binder course, tack coat, top course shall be provided in addition to the placement and finishing of the material. The Contractor shall perform preparation of areas scheduled for pavement and asphalt replacement. Physical replacement of concrete and asphalt pavement shall likely be subcontracted.

Specifications for asphalt and concrete (driveways, sidewalks, curbs, and gutters) replacement are provided in Sections 14.1 and 14.2, respectively. Additional specifications for the placement of concrete when the work is considered minor (i.e., a minor structure is defined as a structure with 10 cubic yards of concrete or less) are in Section 15.0 CONCRETE FOR MINOR STRUCTURES REPLACEMENT.

14.1 HOT MIX BITUMINOUS PAVEMENT

Scope of Work

Contractor shall provide all labor, materials, tools, and equipment to install all temporary and permanent paving to restore all roads, driveways, parking lots, and entrances in kind to their preconstruction conditions as shown, specified, and ordered.

References

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

NYSDOT STANDARD SPECIFICATIONS (2020) New York State Department of Transportation
Standard Specifications

ASTM INTERNATIONAL (ASTM)

ASTM C 117	(2017) Standard Test Method for Materials Finer than 75-um (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 136	(2014) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM D 1559	(1989) Resistance to Plastic Flow of Bituminous Mixtures Using Marwill Apparatus
ASTM D 2172	(2017; E 2017) Standard Test Methods for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D 4867/D 4867M	(2009; R 2014) Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D 979	(2015) Standard Practice for Sampling Bituminous Paving Mixtures
ASTM D 3666	(2016) Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D2950/D2950M	(2014) Density of Bituminous Concrete in Place by Nuclear Methods

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO M 323	(2017) Standard Specification for Superpave Volumetric Mix Design
AASHTO R 35	(2017) Standard Practice for Superpave Volumetric Design for Asphalt Mixtures
AASHTO T 166	(2016) Standard Method of Test for Bulk Specific Gravity (G _{Mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
AASHTO T 209	(2012; 2016) Standard Method of Test for Theoretical Maximum Specific Gravity (G _{Mm}) and Density of Hot Mix Asphalt (HMA)
AASHTO T 312	2015 Standard Method of Test for Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor

Quality Assurance

Required Data

Job-Mix formula shall show the following:

- a. Source and proportions, percent by weight, of each ingredient of the mixture;
- b. Correct gradation, the percentages passing each size sieve listed in the specifications for the mixture to be used, for the aggregate and mineral filler from each separate source and from each different size to be used in the mixture and for the composite mixture;
- c. Amount of material passing the No. 200 sieve determined by dry sieving;
- d. Number of blows of hammer compaction per side of molded specimen;
- e. Temperature viscosity relationship of the asphalt cement;
- f. Stability, flow, percent voids in mineral aggregate, percent air voids, unit weight;
- g. Asphalt absorption by the aggregate;
- h. Effective asphalt content as percent by weight of total mix;
- i. Temperature of the mixture immediately upon completion of mixing;
- j. Asphalt performance grade; and
- k. Curves for the leveling, binder, and wearing courses.

Charts

Contractor shall plot and submit, on a grain size chart, the specified aggregate gradation band, the job-mix gradation, and the job-mix tolerance band.

Selection of Optimum Asphalt Content

Contractor shall base selection on percent of total mix and the average of values at the following points on the curves for each mix:

- a. Stability: Peak
- b. Unit Weight: Peak
- c. Percent Air Voids: Median

Delivery, Storage and Handling

Contractor shall inspect materials delivered to the site for damage and store with a minimum of handling. The Contractor shall store aggregates in such a manner as to prevent segregation, contamination, or intermixing of the different aggregate sizes.

Environmental Conditions

Contractor shall place bituminous mixture only during dry weather and on dry surfaces. The Contractor shall place courses only when the surface temperature of the underlying course is greater than 45 degrees Fahrenheit (F) for course thicknesses greater than one inch and 55 degrees F for course thicknesses one inch or less.

Construction Equipment

Calibrated equipment, such as scales, batching equipment, spreaders and similar equipment, shall have been recalibrated by a calibration laboratory approved by the Government within 12 months of commencing work.

Testing Laboratory

Contractor shall provide a testing laboratory for control and acceptance testing functions during periods of mix production, sampling and testing, and whenever materials subject to the provisions of these specifications are being supplied or tested. The laboratory shall provide adequate equipment, space, and utilities as required for the performance of the specified tests.

Surge and Storage Bins

Use of surge and storage bins for temporary storage of hot bituminous mixtures shall not be permitted.

Drum-Dryer Mixer

Contractor shall not use a drum-dryer mixer if specified requirements of the bituminous mixture or of the completed bituminous pavement course cannot be met. If drum-dryer mixer is prohibited, Contractor shall use either batch or continuous mix plants meeting the specifications and producing a satisfactory mix.

Paving Equipment

Spreading Equipment

Contractor shall use self-propelled electronically controlled type unless other equipment is authorized by the Government. Contractor shall equip spreading equipment of the self-propelled electronically controlled type with hoppers, tamping or vibrating devices, distributing screws, electronically adjustable screeds, and equalizing devices. Equipment shall be capable of spreading hot bituminous mixtures without tearing, shoving, or gouging and to produce a finished surface of specified grade and smoothness. The Contractor shall operate spreaders, when laying mixture, at variable speeds between 5 and 45 feet per minute. Spreader shall be designed with a quick and efficient steering device; a forward and reverse traveling speed; and automatic devices to adjust to grade and confine the edges of the mixture to true lines. The use of a spreader that leaves indented areas or other objectionable irregularities in the fresh laid mix during operations is prohibited.

Rolling Equipment

Contractor shall use self-propelled pneumatic-tired rollers supplemented by three-wheel and tandem type steel wheel rollers. The number, type and weight of rollers shall be sufficient to compact the mixture to the required density without detrimentally affecting the compacted material. Rollers shall be suitable for rolling hot-mix bituminous pavements and capable of reversing without backlash. Pneumatic-tired rollers shall be capable of being operated both forward and backward without turning on the mat, and without loosening the surface being rolled. Rollers shall be equipped with suitable devices and apparatus to keep the rolling surfaces wet and prevent adherence of bituminous mixture. Vibratory rollers especially designed for bituminous concrete compaction may be used provided rollers do not impair stability of pavement structure and underlying layers. Contractor shall repair depressions in pavement surfaces resulting from use of vibratory rollers. Rollers shall be self-propelled, single or dual vibrating drums, and steel drive wheels, as applicable; equipped with variable amplitude and separate controls for energy and propulsion.

Hand Tampers

Minimum weight of 25 pounds with a tamping face of not more than 50 square inches.

Mechanical Hand Tampers

Commercial type, operated by pneumatic pressure or by internal combustion.

Products

Paving Materials (Job-Mix Designs)

The Contractor shall develop the mix design as per NYSDOT STANDARD SPECIFICATIONS. The asphalt mix shall be composed of a mixture of well-graded aggregate, mineral filler if required, and asphalt material. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF). No hot-mix asphalt for payment shall be produced until a JMF has been approved. The hot-mix asphalt shall be designed using procedures contained in AASHTO M 323 and AASHTO R 35.

Bituminous stabilized base (Type 3) shall conform to the NYSDOT STANDARD SPECIFICATIONS.

Surface course (Type 7F) shall conform to the NYSDOT STANDARD SPECIFICATIONS.

Subbase shall be Type 1 and shall conform to NYSDOT STANDARD SPECIFICATIONS, unless otherwise specified on the Contract Drawings.

Prime and Tack coat as per NYSDOT STANDARD SPECIFICATIONS. The prime coat shall be required if it shall be at least seven [7] days before the surfacing (Asphalt cement hot mix concrete) layer is constructed on the underlying (base course, etc.) compacted material. Contractor shall receive approval prior to paving, to waive prime coat requirement.

Asphalt Cement Binder as per NYSDOT STANDARD SPECIFICATIONS.

Traffic Marking

Contractor shall provide traffic marking paint with chlorinated rubber base.

Contractor shall provide factory-mixed, quick-drying and non-bleeding; FS TT-P-115, Type III.

Color shall be in accordance with the Town of Lockport, County of Niagara, and NYDOT requirements.

Source Quality Control

Contractor shall use a commercial laboratory approved by the Government to perform testing. The laboratory used to perform all sampling and testing shall meet the requirements of ASTM D 3666 and NYDOT. A certification signed by the manager of the laboratory stating that it meets these requirements or clearly listing all deficiencies shall be submitted to the Government prior to the start of restoration. The certification shall contain as a minimum:

- a. Qualifications of personnel; laboratory manager, supervising technician, and testing technicians.
- b. A listing of equipment to be used in developing the job mix.
- c. A copy of the laboratory's quality control system.
- d. Evidence of participation in the AASHTO Materials Reference Laboratory (AMRL) program.

Tests

Contractor shall perform testing in accordance with the NYSDOT STANDARD SPECIFICATIONS.

Subgrades

Placed subgrades shall be prepared in accordance with Section 12.0 BACKFILL AND COMPACTION. Existing Subgrades shall be proof rolled and prepared in accordance with NYSDOT STANDARD SPECIFICATIONS.

Base Course

Aggregate Base Course shall be constructed in accordance with NYSDOT STANDARD SPECIFICATIONS.

Bituminous Stabilized Base Course

Bituminous Stabilized Base Course shall be constructed in accordance with NYSDOT STANDARD SPECIFICATIONS.

Surface Course

Surface Course shall be constructed in accordance with NYSDOT STANDARD SPECIFICATIONS.

Overlays

- a. Contractor shall mill bituminous pavement to depth shown and dispose of milling.
- b. Type 7F2 shall be used as the surface course. Before being placed, the base course shall be swept clean and then covered with a uniform tack coat at the rate of 0.10 gallon per square yard. Edges of the trench shall be thoroughly painted with the same material in addition to the 0.10 gallon per square yard.
- c. After tack coating, the surface material shall be immediately spread and raked to conform with the existing pavement.

Transportation of Bituminous Mixtures

Contractor shall transport bituminous material from the mixing plant to the paving site in trucks having tight, clean, smooth beds that have been coated with a minimum amount of concentrated solution of hydrated lime and water or other approved coating to prevent adhesion of the mixture to the truck. Petroleum products shall not be permitted for coating truck. If air temperature is less than 60 degrees F or if haul time is greater than 30 minutes, Contractor shall cover each load with canvas or other approved material of ample size to protect the mixture from the loss of heat. The Contractor shall make deliveries so that the spreading and rolling of all the mixture prepared for one day's run can be completed during daylight, unless adequate approved artificial lighting is provided. Contractor shall deliver mixture to area to be paved so that the temperature at the time of dumping into the spreader is within the range specified herein. The Contractor shall reject loads that are below minimum temperature, that have crusts of cold unworkable material, or that have been wet excessively by rain. Hauling over freshly laid material is prohibited.

Surface Preparation of Underlying Course

Prior to the laying of the asphalt concrete, Contractor shall clean underlying course of foreign or objectionable matter with power blowers or power brooms, supplemented by hand brooms and other cleaning methods where necessary. During the placement of multiple lifts of bituminous concrete, each succeeding lift of bituminous concrete shall have its underlying lift cleaned and provided with a bituminous tack coat if the time period between the placement of each lift of bituminous concrete exceeds 14 days, or the underlying bituminous concrete has become dirty. The Contractor shall remove grass and other vegetative growth from existing cracks and surfaces.

Spraying of Contact Surfaces

Contractor shall spray contact surfaces of previously constructed pavement with a thin coat of bituminous materials to act as an anti-stripping agent. The Contractor shall paint contact surfaces of structures with a thin coat of emulsion or other approved bituminous material prior to placing the bituminous mixture. Contractor shall tack coat the previously placed primed coats on base courses when surface has become excessively dirty and cannot be cleaned or when primed surface has cured to the extent that it has lost all bonding effect.

Placement

Machine Spreading

TABLE 2
MINIMUM SPREADING TEMPERATURES

Base Temp. in Degrees F*	Wearing, Binding, or Course Leveling Thickness, inches							
	1/2	3/4	1	1 1/2	2	3	3 1/2	4
20-32**	---	---	---	---	---	---	275**	260**
+32-40**	---	---	---	---	295	280	270	260
+40-50	---	---	---	300	285	275	265	255
+50-60	---	---	300	295	280	270	260	255
+60-70	---	300	290	285	275	265	255	250
+70-80	300	290	285	280	270	265	255	250
+80-90	290	280	275	270	265	260	250	250
+90	280	275	270	265	265	255	250	250

* Note: Base on which mix is placed.

** Note: Increase by 15 degrees when placement is on base or subbase containing frozen moisture. Normally, hot mix paving is not allowed on base temperatures below 45 degrees F.

The range of temperatures of the mixtures at the time of spreading shall be between 250 degrees F and 300 degrees F. Bituminous concrete having temperatures less than minimum spreading temperature when dumped into the spreader shall be rejected. Contractor shall adjust spreader and regulate speed so that the surface of the course is smooth and continuous without tears and pulling, and of such depth that, when compacted, the surface conforms with the cross section, grade, and contour indicated. Unless otherwise directed, Contractor shall begin the placing along the centerline of areas to be paved on a crowned section or on the high side of areas with a one-way slope. The Contractor shall place mixture in consecutive adjacent strips having a minimum width of 10 feet, except where the edge lanes require strips less than 10 feet to complete the area. Contractor shall construct longitudinal joints and edges to true line markings. The Contractor shall establish lines parallel to the centerline of the area to be paved, and place string lines coinciding with the established lines for the spreading machine to follow. Contractor shall provide the number and location of the lines needed to accomplish proper grade control. When specified grade and smoothness requirements can be met for initial lane construction by use of an approved long ski-type device of not less than 30 feet in length and for subsequent lane construction by use of a short ski or shoe, in-place string lines for grade control may be omitted. The Contractor shall place mixture as nearly continuous as possible and adjust the speed of placing as needed to permit proper rolling.

Shoveling, Raking, and Tamping After Machine-Spreading

Shovelers and rakers shall follow the spreading machine. Contractor shall add or remove hot mixture and rake the mixture as required to obtain a course that when completed shall conform to requirements specified herein. Broadcasting or fanning of mixture over areas being compacted is prohibited. When segregation occurs in the mixture during placing, Contractor shall suspend spreading operation until the cause is determined and corrected. Contractor shall correct irregularities in alignment left by the spreader by trimming directly behind the machine. Immediately after trimming, Contractor shall compact edges of the course by tamping laterally with a metal lute or by other approved methods. Distortion of the course during tamping is prohibited.

Hand-Spreading in Lieu of Machine-Spreading

In areas where the use of machine spreading is impractical, Contractor shall spread mixture by hand. The range of temperatures of the mixtures when dumped onto the area to be paved shall be between 250- and 300-degrees F. Mixtures having temperatures less than minimum spreading temperature when dumped onto the area to be paved shall be rejected. Contractor shall spread hot mixture with rakes in a uniformly loose layer of a thickness that, when compacted, shall conform to the required grade, thickness, and smoothness. During hand spreading, Contractor shall place each shovelful of mixture by turning the shovel over in a manner that shall prevent segregation. Contractor shall not place the mixture by throwing or broadcasting from a shovel. Contractor shall not dump loads any faster than can be properly handled by the shovelers and rakers.

Compaction of Mixture

Contractor shall compact mixture by rolling. The Contractor shall begin rolling as soon as placement of mixture shall bear rollers. Delays in rolling freshly spread mixture shall not be permitted. Contractor shall start rolling longitudinally at the extreme sides of the lanes and proceed toward center of pavement, or toward high side of pavement with a one-way slope. Contractor shall operate rollers so that each trip overlaps the previous adjacent strip by at least one foot. Alternate trips of the roller shall be of slightly different lengths. Contractor shall conduct tests for conformity with the specified crown, grade, and smoothness immediately after initial rolling. Before continuing rolling, Contractor shall correct variations by removing or adding materials as necessary. If required, Contractor shall subject course to diagonal rolling with the steel wheeled roller crossing the lines of the previous rolling while mixture is hot and in a compactable condition. Speed of the rollers shall be slow enough to avoid displacement of hot mixture. Contractor shall correct displacement of mixture immediately by use of rakes and fresh mixture or remove and replace mixture as directed. Contractor shall continue rolling until roller marks are eliminated and course has a density of at least 90 percent but not more than 100 percent of that attained in a laboratory specimen of the same mixture prepared in accordance with ASTM D 1559. During rolling, Contractor shall moisten wheels of the rollers enough to prevent adhesion of mixture to wheels, but excessive water is prohibited. Operation of rollers shall be by competent and experienced operators. Contractor shall provide sufficient rollers for each spreading machine in operation on the job and to handle plant output. In places not accessible to the rollers, Contractor shall compact mixture thoroughly with hot hand tampers. Skin patching of an area after compaction is prohibited. Contractor shall remove mixture that becomes mixed with foreign materials or is defective and replace with fresh mixture compacted to the density specified herein. Roller shall pass over unprotected edge of the course only when laying of course is to be discontinued for such length of time as to permit mixture to become cold.

Joints

Joints shall present the same texture and smoothness as other portions of the course, except permissible density at the joint may be up to 2 percent less than the specified course density. Contractor shall carefully make joints between old and new pavement or within new pavements in a manner to ensure a thorough and continuous bond between old and new sections of the course. Vertical contact surfaces of previously constructed sections that are coated with dust, sand, or other objectionable material shall be painted with a thin uniform coat of emulsion or other approved bituminous material just before placing fresh mixture.

Transverse

Roller shall pass over unprotected end of freshly laid mixture only when laying of course is to be discontinued. Except when an approved bulkhead is used, Contractor shall cut back the edge of previously laid course to expose an even, vertical surface for the full thickness of the course. When required, rake fresh mixture against joints, Contractor shall thoroughly tamp with hot tampers, smooth with hot smoothers, and roll. Transverse joints in adjacent lanes shall be offset a minimum of 2 feet.

Longitudinal

Contractor shall space longitudinal joints 6 inches apart. The Contractor shall not allow joints to coincide with joints of existing pavement or previously placed courses. Spreader screed shall overlap previously placed lanes 2 to 3 inches and be of such height to permit compaction to produce a smooth dense joint. With a lute, push back mixture placed on the surface of previous lanes to the joint edge. Do not scatter mix. Remove and waste excess material. When edges of longitudinal joints are irregular, honeycombed, or poorly compacted, Contractor shall cut back unsatisfactory sections of joint and expose an even vertical surface for the full thickness of the course. When required, Contractor shall rake fresh mixture against joint, thoroughly tamp with hot tampers, smooth with hot smoothers, and roll while hot.

Field Quality Control

Sampling

Pavement and Mixture

Contractor shall take plant samples for the determination of mix properties and field samples for thickness and density of the completed pavements. Contractor shall furnish tools, labor and material for samples, and satisfactory replacement of pavement. Contractor shall take samples and tests at not less than frequency specified hereinafter and at the beginning of plant operations; for each day's work as a minimum; each change in the mix or equipment; and as often as directed. Contractor shall accomplish sampling in accordance with ASTM D 979.

Testing

Bituminous Mix Tests

Contractor shall test one sample for each 500 tons, or fraction thereof, of the uncompacted mix for extraction in accordance with ASTM D 2172; Contractor shall perform a sieve analysis on each extraction sample in accordance with ASTM C 136 and ASTM C 117.

Contractor shall test one sample for each 500 tons or fraction thereof for stability and flow in accordance with ASTM D 1559. Contractor shall test one sample for each material blend for Tensile Strength Ratio in accordance with ASTM D 4867/D 4867M. Test one sample for each 500 tons or fraction thereof for maximum specific gravity according to AASHTO T 209 and bulk specific gravity according to AASHTO T 166. Test one sample for each material blend for Tensile Strength Ratio in accordance with ASTM D4867/D4867M.

Pavement Courses

Contractor shall perform the following tests:

- a. Density: Compare density of in-place material against laboratory specimen or certificates on same bituminous concrete mixture. Use nuclear devices to determine densities. A minimum of one in-place density test shall be performed for every 500 square yards of pavement and a minimum of one in-place density test for each property at which pavement is constructed. Minimum acceptable density of in-place course material shall be 90 percent of the recorded laboratory specimen or certificate density. Maximum acceptable density shall be 98 percent.
- b. Thickness: Determine thickness of each course from samples taken for the field density test. The maximum allowable deficiency at any point shall not be more than 1/4 inch less than the thickness for the indicated course. Average thickness of course or of combined courses shall be not less than

the indicated thickness. Where a deficiency exceeds the specified tolerances, correct each such representative area or areas by removing the deficient pavement and replacing with new pavement.

- c. Smoothness: Straightedge test the compacted surface of each course as work progresses. Apply straightedge parallel with and at right angles to the centerline after final rolling. Unevenness of each course shall not vary more than 1/4 inch in 10 feet; variations in the wearing course shall not vary more than 1/8 inch in 10 feet. Correct each portion of the pavement showing irregularities greater than that specified.
- d. Finished Grades: Finish grades of each course placed shall not vary from the finish elevations, profiles, and cross sections indicated by more than 1/4 inch. Finished surface of the final wearing course shall be tested by running lines of levels at intervals of 10 feet longitudinally and transversely to determine elevations of completed pavement. Within 45 days after completion of final placement, correct deficient paved areas by removing existing work and replacing with new materials that meet the specifications. Skin patching for correcting low areas is prohibited.
- e. Finish Surface Texture of Wearing Course: Visually check final surface texture for uniformity and reasonable compactness and tightness. Final wearing course with a surface texture having undesirable irregularities such as segregation, cavities, pulls or tears, checking, excessive exposure of coarse aggregates, sand streaks, indentations, ripples, or lack of uniformity shall be removed and replaced with new materials.

Pavement Testing

The Contractor shall take cores from the completed mats and test for density/thickness compliance with the binder and wearing courses in accordance with NYSDOT STANDARD SPECIFICATIONS. Results of both the nuclear testing and core testing shall include the bulk specific gravity, maximum specific gravity, and calculated air voids, along with other ancillary information [core number, location, lift, asphalt mix, date, etc.]. Density of compacted mat shall be such that air voids range between 2 and 8%.

The Contractor is required to take 5 cores per lot. If the area is smaller, the Contractor is required to get Government approval to reduce the number of cores.

Protection

Contractor shall not permit vehicular traffic, including heavy equipment, on pavement until surface temperature has cooled to at least 120 degrees F. The Contractor shall measure surface temperature by approved surface thermometers or other satisfactory methods.

Patching

As directed by the Government, in writing, remove and replace all defective areas. Contractor shall cut out such areas and fill with fresh bituminous concrete. Contractor shall compact to the required density.

Cleaning and Protection

Cleaning

After completion of paving operations, Contractor shall clean surfaces of excess or spilled bituminous materials and all foreign matter.

Cover Openings

Contractor shall cover openings of drainage structures in the area of paving until permanent coverings are placed.

Marking Pavement

New pavement shall be marked to replace the pavement markings that existed prior to construction.

Contractor shall sweep surface with power broom supplemented by hand brooms to remove loose material and dirt; the Contractor shall prepare surface in accordance with paint manufacturer's instructions.

Contractor shall not begin marking bituminous concrete pavement until approved by the Government.

Application: Using mechanical equipment, Contractor shall provide uniform straight edges in two separate coats applied in accordance with paint manufacturer's recommended rates.

14.2 CONCRETE SIDEWALKS, CURBS, AND GUTTERS

Scope of Work

Contractor shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish and install conventionally formed or machine formed concrete curbs, gutters and sidewalks for site restoration.

Work includes:

- a. Providing concrete consisting of portland cement, fine and coarse aggregates, water, and approved admixtures; combined, mixed, transported placed, finished, and cured.
- b. Fabrication and placement of reinforcement, including ties and supports.
- c. Design, erection, and removal of formwork.
- d. Building into the concrete all sleeves, frames, anchors, inserts, and other items required to be embedded in the concrete.

Perform all work in accordance with ACI 318.

References

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN CONCRETE INSTITUTE INTERNATIONAL (ACI)

ACI 117	(2010; Reapproved 2015; Errata 2017) Specifications for Tolerances for Concrete Construction and Materials and Commentary
ACI 301	(2016; Errata 2017) Specifications for Structural Concrete
ACI 302.1R	(2015) Guide for Concrete Floor and Slab Construction

ACI 304R	(2000; Reapproved 2009) Guide for Measuring, Mixing, Transporting, and Placing Concrete
ACI 318	(2014; Errata 1-2 2014; Errata 3-4 2015; Errata 5 2017) Building Code Requirements for Structural Concrete and Commentary
ACI 347R	(2014; Errata 2017) Guide to Formwork for Concrete
ACI SP-66	(2004) ACI Detailing Manual
ACI/MCP PACK	(2017) Manual of Concrete Practice Pack

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION
OFFICIALS (AASHTO)

AASHTO M 182	(1991; R 2000) Burlap Cloth Made from Jute or Kenaf
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ASTM INTERNATIONAL (ASTM)

ASTM A1064/A1064M	(2017) Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A615/A615M	(2016) Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM C1064/C1064M	(2017) Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1260	(2014) Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C143/C143M	(2015a) Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150/C150M	(2018) Standard Specification for Portland Cement
ASTM C1567	(2013) Standard Test Method for Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602/C1602M	(2012) Standard Specification for Mixing Water Used in Production of Hydraulic Cement Concrete
ASTM C171	(2016) Standard Specification for Sheet Materials for Curing Concrete
ASTM C172/C172M	(2017) Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173/C173M	(2016) Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C231/C231M	(2017a) Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

ASTM C260/C260M	(2016) Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	(2011) Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C31/C31M	(2018a) Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33/C33M	(2018) Standard Specification for Concrete Aggregates
ASTM C39/C39M	(2018) Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C494/C494M	(2017) Standard Specification for Chemical Admixtures for Concrete
ASTM C618	(2017a) Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C685/C685M	(2017) Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C920	(2018) Standard Specification for Elastomeric Joint Sealants
ASTM C94/C94M	(2017a) Standard Specification for Ready-Mixed Concrete
ASTM D1752	(2004a; R 2013) Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D412	(2016) Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
ASTM D471	(2016a) Standard Test Method for Rubber Property - Effect of Liquids
ASTM D75/D75M	(2014) Standard Practice for Sampling Aggregates
ASTM E1155	(2014) Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers
ASTM E1155M	(2014) Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers (Metric)
ASTM E1643	(2018a) Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs
ASTM E1745	(2017) Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs
ASTM E1993/E1993M	(1998; R 2013; E 2013) Standard Specification for Bituminous Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs
ASTM E96/E96M	(2016) Standard Test Methods for Water Vapor Transmission of Materials

SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that shall review the submittal for the Government. Architect-Engineer approval is required for submittals with an "AE" designation. Resident Officer approval is required for submittals with a "RO" designation. Submit the following in accordance with Section 24.0 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

- Installation Drawings; G

SD-03 Product Data

- Air-Entraining Admixture; G
- Accelerating Admixture; G
- Water-Reducing or Retarding Admixture; G
- Curing Materials; G
- Expansion Joint Filler Strips, Premolded; G
- Joint Sealants - Field Molded Sealants; G
- Waterstops; G
- Chemical Floor Hardener
- Conveying and Placing Concrete; G

The methods and equipment for transporting, handling, depositing, and consolidating the concrete shall be submitted prior to the first concrete placement.

- Mix Design Data; G
- Ready-Mix Concrete; G
- Curing Compound; G
- Manufacturer's literature which demonstrates compliance with applicable specifications for the above materials.
- Formwork; G
- Formwork design shall be submitted prior to the first concrete placement.
- Vapor Barrier; G
- Steel Reinforcement; G
- Accessories; G
- Fly Ash; G

SD-06 Test Reports

- Aggregates; G

Aggregates shall be accepted on the basis of certificates of compliance and test reports that show the material(s) meets the quality and grading requirements of the specifications under which it is furnished.

- Concrete Mixture Proportions; G

Ten days prior to placement of concrete, the contractor shall submit the mixture proportions that shall produce concrete of the quality required. Applicable test reports shall be submitted to verify that the concrete mixture proportions selected shall produce concrete of the quality specified.

- Measurement of Floor Tolerances; G
- Compressive Strength Testing; G
- Slump; G
- Air Content; G
- Temperature; G

SD-07 Certificates

- Cementitious Materials; G

Certificates of compliance attesting that the concrete materials meet the requirements of the specifications shall be submitted in accordance with the Special Clause "CERTIFICATES OF COMPLIANCE". Cementitious material shall be accepted on the basis of a manufacturer's certificate of compliance, accompanied by mill test reports that the material(s) meet the requirements of the specification under which it is furnished.

- Pozzolan; G
- Aggregates; G

Aggregates shall be accepted on the basis of certificates of compliance and tests reports that show the material(s) meet the quality and grading requirements of the specifications under which it is furnished.

- Delivery Tickets
- Reinforcement; G
Steel producer's certificate of mill analysis;
Reinforcement tensile and bend test data.

SD-08 Manufacturer's Instructions

- Chemical Floor Hardener; G
Curing Compound; G

Weather Limitations

Placing During Cold Weather

Concrete placement shall not take place when the air temperature reaches 40 degrees F and is falling, or is already below that point. Placement may begin when the air temperature reaches 35 degrees F and is rising, or is already above 40 degrees F. Provisions shall be made to protect the concrete from freezing during the specified curing period. If necessary, to place concrete when the temperature of the air, aggregates, or water is below 35 degrees F, placement and protection shall be approved in writing. Approval shall be contingent upon full conformance with the following provisions. The underlying material shall be prepared and protected so that it is entirely free of frost when the concrete is deposited. Mixing water and aggregates shall be heated as necessary to result in the temperature of the in-place concrete being between 50 and 85 degrees F. Methods and equipment for heating shall be approved. The aggregates shall be free of ice, snow, and frozen lumps before entering the mixer. Covering and other means shall be provided for maintaining the concrete at a temperature of at least 50 degrees F for not less than 72 hours after placing, and at a temperature above freezing for the remainder of the curing period.

Placing During Warm Weather

The temperature of the concrete as placed shall not exceed 85 degrees F except where an approved retarder is used. The mixing water and/or aggregates shall be cooled, if necessary, to maintain a satisfactory placing temperature. The placing temperature shall not exceed 95 degrees F at any time.

Plant, Equipment, Machines, and Tools

General Requirements

Plant, equipment, machines, and tools used in the work shall be subject to approval and shall be maintained in a satisfactory working condition at all times. The equipment shall have the capability of producing the required product, meeting grade controls, thickness control and smoothness requirements as specified. Use of the equipment shall be discontinued if it produces unsatisfactory results. The Government shall have access at all times to the plant and equipment to ensure proper operation and compliance with specifications.

Slip Form Equipment

Slip form paver or curb forming machine, shall be approved based on trial use on the job and shall be self-propelled, automatically controlled, crawler mounted, and capable of spreading, consolidating, and shaping the plastic concrete to the desired cross section in one pass.

Products

Concrete

Concrete shall be air entrained. Concrete shall conform to the applicable requirements of Appendix K, CONCRETE FOR MINOR STRUCTURES except as otherwise specified. Concrete shall have a minimum compressive strength of 4000 psi at 28 days. Maximum size of aggregate shall be 1-1/2 inches. Submit copies of certified delivery tickets indicating mix design, slump at batch plant and batch time for all concrete used in the construction.

Air Content

Mixtures shall have air content by volume of concrete of 5 to 7 percent, based on measurements made immediately after discharge from the mixer. Submit admixtures product data sheets.

Slump

The concrete slump shall be 3 inches plus or minus 1 inch where determined in accordance with ASTM C 143/C 143M.

Reinforcement Steel

All deformed bars shall be Grade 60 ($f_y = 60,000$ psi) unless otherwise stated. Reinforcement bars shall conform to ASTM A615/A615M. Reinforcement bars shall be delivered to the site in bundles with tags attached. Wire mesh reinforcement shall conform to ASTM A1064/A1064M.

Concrete Curing Materials

Impervious Sheet Materials

Impervious sheet materials shall conform to ASTM C 171, type optional, except that polyethylene film, if used, shall be white opaque.

Burlap

Burlap shall conform to AASHTO M 182.

White Pigmented Membrane-Forming Curing Compound

White pigmented membrane-forming curing compound shall conform to ASTM C 309, Type 2. Submit copies of curing compound product data sheets.

Concrete Protection Materials

Concrete protection materials shall be a linseed oil mixture of equal parts, by volume, of linseed oil and either mineral spirits, naphtha, or turpentine. At the option of the Contractor, commercially prepared linseed oil mixtures, formulated specifically for application to concrete to provide protection against the action of deicing chemicals may be used, except that emulsified mixtures are not acceptable.

Joint Filler Strips

Contraction Joint Filler for Curb and Gutter

Contraction joint filler for curb and gutter shall consist of hard-pressed fiberboard.

Expansion Joint Filler, Premolded

Premolded expansion joint filler shall conform to ASTM D 1751 or ASTM D 1752, 1/2 inch thick, unless otherwise indicated.

Joint Sealants

Joint sealant, cold-applied, shall conform to ASTM C 920 or ASTM D 5893.

Form Work

Form work shall be designed and constructed to ensure that the finished concrete shall conform accurately to the indicated dimensions, lines, and elevations, and within the tolerances specified. Forms shall be of wood or steel, straight, of sufficient strength to resist springing during depositing and consolidating concrete. Wood forms shall be surfaced plank, 2 inches nominal thickness, straight and free from warp, twist, loose knots, splits or other defects. Wood forms shall have a nominal length of 10 feet. Radius bends may be formed with 3/4 inch boards, laminated to the required thickness. Steel forms shall be channel-formed sections with a flat top surface and with welded braces at each end and at not less than two intermediate points. Ends of steel forms shall be interlocking and self-aligning. Steel forms shall include flexible forms for radius forming, corner forms, form spreaders, and fillers. Steel forms shall have a nominal length of 10 feet with a minimum of 3 welded stake pockets per form. Stake pins shall be solid steel rods with chamfered heads and pointed tips designed for use with steel forms. Form height shall be consistent with concrete design thickness. Form construction shall be completed and available for inspection and approval by Government at least 24 hours prior to scheduling of concrete placement.

Sidewalk Forms

Sidewalk forms shall be of a height equal to the full depth of the finished sidewalk.

Curb and Gutter Forms

Curb and gutter outside forms shall have a height equal to the full depth of the curb or gutter. The inside form of curb shall have batter as indicated and shall be securely fastened to and supported by the outside form. Rigid forms shall be provided for curb returns, except that benders or thin plank forms may be used

for curb or curb returns with a radius of 10 feet or more, where grade changes occur in the return, or where the central angle is such that a rigid form with a central angle of 90 degrees cannot be used. Back forms for curb returns may be made of 1-1/2 inch benders, for the full height of the curb, cleated together. In lieu of inside forms for curbs, a curb "mule" may be used for forming and finishing this surface, provided the results are approved.

Porous Fill Under Sidewalk

Contractor shall furnish fill consisting of crushed stone meeting the requirements of Crushed Stone for Pipe Bedding as specified in Section 12.0 BACKFILL AND COMPACTION, or other approved material. The Contractor shall properly wet and compact fill to the thickness shown.

Execution

Subgrade Preparation

The subgrade materials shall consist of approved crushed stone placed and compacted in conformance with Section 12.0 BACKFILL. Subgrade shall be prepared and constructed in accordance with grade and cross sections indicated on Contract drawings and the requirements of Section 12.0 BACKFILL AND COMPACTION.

Sidewalk Subgrade

The subgrade shall be tested for grade and cross section with a template extending the full width of the sidewalk and supported between side forms. Prepared subgrade shall be made available for inspection and approval by the Government at least 24 hours prior to the scheduling of concrete placement or before the placement of reinforcement.

Curb and Gutter Subgrade

The subgrade shall be tested for grade and cross section by means of a template extending the full width of the curb and gutter. The subgrade shall be of materials equal in bearing quality to the subgrade under the adjacent pavement. Prepared subgrade shall be made available for inspection and approval by the Government at least 24 hours prior to the scheduling of concrete placement or before the placement of reinforcement.

Maintenance of Subgrade

The subgrade shall be maintained in a smooth, compacted condition in conformity with the required section and established grade until the concrete is placed. The subgrade shall be in a moist condition when concrete is placed. The subgrade shall be prepared and protected to produce a subgrade free from frost when the concrete is deposited.

Form Setting

Forms shall be set to the indicated alignment, grade and dimensions. Forms shall be held rigidly in place by a minimum of 3 stakes per form placed at intervals not to exceed 4 feet. Corners, deep sections, and radius bends shall have additional stakes and braces, as required. Clamps, spreaders, and braces shall be used where required to ensure rigidity in the forms.

Forms shall be removed without injuring the concrete. Bars or heavy tools shall not be used against the concrete in removing the forms. Any concrete found defective after form removal shall be promptly and satisfactorily repaired. Forms shall be cleaned and coated with form oil each time before concrete is placed. Wood forms may, instead, be thoroughly wetted with water before concrete is placed, except that with

probable freezing temperatures, oiling is mandatory. Contractor shall exercise judgment in the use and application of form oils and shall seek to minimize overspray and spillage of oils to the ground surface. Any spillage of oils shall be promptly cleaned. Submit form oil product data sheets.

Sidewalks

Forms for sidewalks shall be set with the upper edge true to line and grade with an allowable tolerance of 1/8 inch in any 10 foot long section. After forms are set, grade and alignment shall be checked with a 10 foot straightedge. Forms shall have a transverse slope of 1/4 inch per foot with the low side adjacent to the roadway. Side forms shall not be removed for 12 hours after finishing has been completed.

Curbs and Gutters

The forms of the front of the curb shall be removed not less than 2 hours nor more than 6 hours after the concrete has been placed. Forms back of curb shall remain in place until the face and top of the curb have been finished, as specified for concrete finishing. Gutter forms shall not be removed while the concrete is sufficiently plastic to slump in any direction.

Machine Formed

Automatic curb, gutter and sidewalk machine may be used for forming, at Contractor's option. Concrete shall have properties as specified in Section 15.0 CONCRETE FOR MINOR STRUCTURES REPLACEMENT, except that maximum slump shall be 21/2-inches, air content shall be two percent of design, and minimum compressive strength shall be 4500 psi at 28 days. Machine forming shall produce curbs, gutters and sidewalks to the required cross section, lines, grades, finish, and jointing, as specified for conventionally formed concrete. If results do not conform to the requirements remove and replace, at no additional cost.

Sidewalk Concrete Placement and Finishing

Formed Sidewalks

Concrete shall be placed in the forms in one layer. When consolidated and finished, the sidewalks shall be of the thickness indicated. After concrete has been placed in the forms, a strike-off guided by side forms shall be used to bring the surface to proper section to be compacted. The concrete shall be consolidated by tamping and spading. Reinforced concrete shall be consolidated with an approved vibrator of sufficient diameter to fit between reinforcement bars or welded wire reinforcement (WWR). Concrete surface shall be finished to grade with a strike off.

Concrete Finishing

After straight edging, when most of the water sheen has disappeared, and just before the concrete hardens, the surface shall be finished with a wood, magnesium float or darby to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. A scored surface shall be produced by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, followed by edging.

Edge and Joint Finishing

All slab edges, including those at formed joints, shall be finished with an edger having a radius of 1/8 inch. Transverse joint shall be edged before brooming, and the brooming shall eliminate the flat surface left by the surface face of the edger. Corners and edges which have crumbled and areas which lack sufficient mortar for proper finishing shall be cleaned and filled solidly with a properly proportioned mortar mixture and then finished.

Surface and Thickness Tolerances

Finished surfaces shall not vary more than 5/16 inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness shall be up to 1/4 inch.

Curb and Gutter Concrete Placement and Finishing

Formed Curb and Gutter

Concrete shall be placed to the section required in a single lift. Consolidation shall be achieved by using approved mechanical vibrators. Curve shaped gutters shall be finished with a standard curb "mule".

Curb and Gutter Finishing

Approved slipformed curb and gutter machines may be used in lieu of hand placement.

Concrete Finishing

Exposed surfaces shall be floated and finished with a smooth wood float until true to grade and section and uniform in texture. Floated surfaces shall then be brushed with a fine-hair brush with longitudinal strokes. The edges of the gutter and top of the curb shall be rounded with an edging tool to a radius of 1/2 inch. Immediately after removing the front curb form, the face of the curb shall be rubbed with a wood or concrete rubbing block and water until blemishes, form marks, and tool marks have been removed. The front curb surface, while still wet, shall be brushed in the same manner as the gutter and curb top. The top surface of gutter and entrance shall be finished to grade with a wood float.

Joint Finishing

Curb edges at formed joints shall be finished as indicated.

Surface and Thickness Tolerances

Finished surfaces shall not vary more than 1/4 inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness shall be up to 1/4 inch.

Sidewalk Joints

Sidewalk joints shall be constructed to divide the surface into rectangular areas. Transverse contraction joints shall be spaced at a distance equal to the sidewalk width or 5 feet on centers, whichever is less, and shall be continuous across the slab. Longitudinal contraction joints shall be constructed along the centerline of all sidewalks 10 feet or more in width. Transverse expansion joints shall be installed at sidewalk returns and opposite expansion joints in adjoining curbs. Where the sidewalk is not in contact with the curb, transverse expansion joints shall be installed as indicated. Expansion joints shall be formed about structures and features which project through or into the sidewalk pavement, using joint filler of the type, thickness, and width indicated. Expansion joints are not required between sidewalks and curb that abut the sidewalk longitudinally.

Sidewalk Contraction Joints

The contraction joints shall be formed in the fresh concrete by cutting a groove in the top portion of the slab to a depth of at least one-fourth of the sidewalk slab thickness, using a jointer to cut the groove, or by sawing a groove in the hardened concrete with a power-driven saw, unless otherwise approved. Sawed joints shall be constructed by sawing a groove in the concrete with a 1/8 inch blade to the depth indicated. An ample

supply of saw blades shall be available on the job before concrete placement is started, and at least one standby sawing unit in good working order shall be available at the jobsite at all times during the sawing operations.

Sidewalk Expansion Joints

Expansion joints shall be formed with 1/2 inch joint filler strips. Joint filler in expansion joints surrounding structures and features within the sidewalk may consist of preformed filler material conforming to ASTM D 1752 or building paper. Joint filler shall be held in place with steel pins or other devices to prevent warping of the filler during floating and finishing. Immediately after finishing operations are completed, joint edges shall be rounded with an edging tool having a radius of 1/8 inch, and concrete over the joint filler shall be removed. At the end of the curing period, expansion joints shall be cleaned and filled with cold-applied joint sealant. Joint sealant shall be gray or stone in color. The joint opening shall be thoroughly cleaned before the sealing material is placed. Sealing material shall not be spilled on exposed surfaces of the concrete. Concrete at the joint shall be surface dry and atmospheric and concrete temperatures shall be above 50 degrees F at the time of application of joint sealing material. Excess material on exposed surfaces of the concrete shall be removed immediately and concrete surfaces cleaned.

Reinforcement Steel Placement

Reinforcement steel shall be accurately and securely fastened in place with suitable supports and ties before the concrete is placed.

Curb and Gutter Joints

Curb and gutter joints shall be constructed at right angles to the line of curb and gutter. Reinforcement placement shall be completed and made available for inspection by the Government at least 24 hours prior to the scheduling of concrete placement. WWR shall be elevated on chairs or concrete block prior to concrete placement. WWR shall not be permitted to be laid on the ground and pulled into location at the time of concrete placement. A minimum of 2 inches of concrete cover shall be maintained at all edges of reinforcement.

Contraction Joints

Contraction joints shall be constructed directly opposite contraction joints in abutting portland cement concrete pavements and spaced so that monolithic sections between curb returns shall not be less than 5 feet nor greater than 15 feet in length.

- a. Contraction joints (except for slip forming) shall be constructed by means of 1/8-inch-thick separators and of a section conforming to the cross section of the curb and gutter. Separators shall be removed as soon as practicable after concrete has set sufficiently to preserve the width and shape of the joint and prior to finishing.
- b. When slip forming is used, the contraction joints shall be cut in the top portion of the gutter/curb hardened concrete in a continuous cut across the curb and gutter, using a power-driven saw. The depth of cut shall be at least one-fourth of the gutter/curb depth and 1/8 inch in width.

Expansion Joints

Expansion joints shall be formed by means of preformed expansion joint filler material cut and shaped to the cross section of curb and gutter. Expansion joints shall be provided in curb and gutter directly opposite expansion joints of abutting portland cement concrete pavement, and shall be of the same type and thickness as joints in the pavement. Where curb and gutter do not abut portland cement concrete pavement, expansion joints at least 1/2 inch in width shall be provided at intervals not less than 10 meters (30 feet) nor greater

than 35 meters (120 feet). Expansion joints shall be provided in nonreinforced concrete gutter at locations indicated. Expansion joints shall be sealed immediately following curing of the concrete or as soon thereafter as weather conditions permit. Expansion joints and the top 1 inch depth of curb and gutter contraction-joints shall be sealed with joint sealant. The joint opening shall be thoroughly cleaned before the sealing material is placed. Sealing material shall not be spilled on exposed surfaces of the concrete. Concrete at the joint shall be surface dry and atmospheric and concrete temperatures shall be above 50 degrees F at the time of application of joint sealing material. Excess material on exposed surfaces of the concrete shall be removed immediately and concrete surfaces cleaned.

Curing and Protection

General Requirements

Concrete shall be protected against loss of moisture and rapid temperature changes for at least 7 days from the beginning of the curing operation. Unhardened concrete shall be protected from rain and flowing water. All equipment needed for adequate curing and protection of the concrete shall be on hand and ready for use before actual concrete placement begins. Protection shall be provided as necessary to prevent cracking of the pavement due to temperature changes during the curing period.

Mat Method

The entire exposed surface shall be covered with 2 or more layers of burlap. Mats shall overlap each other at least 6 inches. The mat shall be thoroughly wetted with water prior to placing on concrete surface and shall be kept continuously in a saturated condition and in intimate contact with concrete for not less than 7 days.

Impervious Sheeting Method

The entire exposed surface shall be wetted with a fine spray of water and then covered with impervious sheeting material. Sheets shall be laid directly on the concrete surface with the light-colored side up and overlapped 12 inches when a continuous sheet is not used. The curing medium shall not be less than 18-inches wider than the concrete surface to be cured, and shall be securely weighted down by heavy wood planks, or a bank of moist earth placed along edges and laps in the sheets. Sheets shall be satisfactorily repaired or replaced if torn or otherwise damaged during curing. The curing medium shall remain on the concrete surface to be cured for not less than 7 days.

Membrane Curing Method

A uniform coating of white-pigmented membrane-curing compound shall be applied to the entire exposed surface of the concrete as soon after finishing as the free water has disappeared from the finished surface. Formed surfaces shall be coated immediately after the forms are removed and in no case longer than 1 hour after the removal of forms. Concrete shall not be allowed to dry before the application of the membrane. If any drying has occurred, the surface of the concrete shall be moistened with a fine spray of water and the curing compound applied as soon as the free water disappears. Curing compound shall be applied in two coats by hand-operated pressure sprayers at a coverage of approximately 200 square feet per gallon for the total of both coats. The second coat shall be applied in a direction approximately at right angles to the direction of application of the first coat. The compound shall form a uniform, continuous, coherent film that shall not check, crack, or peel and shall be free from pinholes or other imperfections. If pinholes, abrasion, or other discontinuities exist, an additional coat shall be applied to the affected areas within 30 minutes. Concrete surfaces that are subjected to heavy rainfall within 3 hours after the curing compound has been applied shall be resprayed by the method and at the coverage specified above. Areas where the curing compound is damaged by subsequent construction operations within the curing period shall be resprayed. Necessary precautions shall be taken to insure that the concrete is properly cured at sawed joints, and that

no curing compound enters the joints. The top of the joint opening and the joint groove at exposed edges shall be tightly sealed before the concrete in the region of the joint is resprayed with curing compound. The method used for sealing the joint groove shall prevent loss of moisture from the joint during the entire specified curing period. Approved standby facilities for curing concrete pavement shall be provided at a location accessible to the jobsite for use in the event of mechanical failure of the spraying equipment or other conditions that might prevent correct application of the membrane-curing compound at the proper time. Concrete surfaces to which membrane-curing compounds have been applied shall be adequately protected during the entire curing period from pedestrian and vehicular traffic, except as required for joint-sawing operations and surface tests, and from any other possible damage to the continuity of the membrane. Submit product data sheets for curing compound.

Backfilling

After curing, debris shall be removed and the area adjoining the concrete shall be backfilled, graded, and compacted to conform to the surrounding area in accordance with lines and grades indicated.

Protection

Completed concrete shall be protected from damage until accepted. The Contractor shall repair damaged concrete and clean concrete discolored during construction. Concrete that is damaged shall be removed and reconstructed for the entire length between regularly scheduled joints. Refinishing the damaged portion shall not be acceptable. Removed damaged portions shall be disposed of as directed.

Protective Coating

Protective coating, of linseed oil mixture, shall be applied to the exposed-to-view concrete surface after the curing period, if concrete shall be exposed to de-icing chemicals within 6 weeks after placement. Concrete to receive a protective coating shall be moist cured.

Application

Curing and backfilling operation shall be completed prior to applying two coats of protective coating. Concrete shall be surface dry and clean before each application. Coverage shall be by spray application at not more than 50 square yards per gallon for first application and not more than 70 square yards per gallon for second application, except that the number of applications and coverage for each application for commercially prepared mixture shall be in accordance with the manufacturer's instructions. Coated surfaces shall be protected from vehicular and pedestrian traffic until dry.

Precautions

Protective coating shall not be heated by direct application of flame or electrical heaters and shall be protected from exposure to open flame, sparks, and fire adjacent to open containers or applicators. Material shall not be applied at ambient or material temperatures lower than 50 degrees F.

Field Quality Control

General Requirements

The Contractor shall perform the inspection and tests described and meet the specified requirements for inspection details and frequency of testing. Based upon the results of these inspections and tests, the Contractor shall take the action and submit reports as required below, and any additional tests to insure that the requirements of these specifications are met.

Preparations for Placing

Foundation or construction joints, forms, and embedded items shall be inspected in sufficient time prior to each concrete placement by the Contractor to certify that it is ready to receive concrete.

Concrete Testing

Strength Testing

The Contractor shall provide molded concrete specimens and perform strength tests. Samples of concrete placed each day shall be taken not less than once a day nor less than once for every 250 cubic yards of concrete. The samples for strength tests shall be taken in accordance with ASTM C 172. Cylinders for acceptance shall be molded in conformance with ASTM C 31/C 31M by an approved testing laboratory. Each strength test result shall be the average of 2 test cylinders from the same concrete sample tested at 28 days, unless otherwise specified or approved. Concrete specified on the basis of compressive strength shall be considered satisfactory if the averages of all sets of three consecutive strength test results equal or exceed the specified strength, and no individual strength test result falls below the specified strength by more than 500 psi.

Air Content

Air content shall be determined in accordance with ASTM C 173 or ASTM C 231. ASTM C 231 shall be used with concretes and mortars made with relatively dense natural aggregates. Two tests for air content shall be made on randomly selected batches of each class of concrete placed during each shift. Additional tests shall be made when excessive variation in concrete workability is reported by the placing foreman or the Government inspector. If results are out of tolerance, the placing foreman shall be notified and he shall take appropriate action to have the air content corrected at the plant. Additional tests for air content shall be performed on each truckload of material until such time as the air content is within the tolerance specified.

Slump Test

Two slump tests shall be made on randomly selected batches of each class of concrete for every 250 cubic yards, or fraction thereof, of concrete placed during each shift. Additional tests shall be performed when excessive variation in the workability of the concrete is noted or when excessive crumbling or slumping is noted along the edges of slip-formed concrete.

Temperature

Determine temperature of concrete at time of placement in accordance with ASTM C1064/C1064M. Check concrete temperature at least once during each shift that concrete is placed for each strength of concrete required.

Thickness Evaluation

The anticipated thickness of the concrete shall be determined prior to placement by passing a template through the formed section or by measuring the depth of opening of the extrusion template of the curb forming machine. If a slip form paver is used for sidewalk placement, the subgrade shall be true to grade prior to concrete placement and the thickness shall be determined by measuring each edge of the completed slab.

Surface Evaluation

The finished surface of each category of the completed work shall be uniform in color and free of blemishes and form or tool marks.

Surface Deficiencies and Corrections

Thickness Deficiency

When measurements indicate that the completed concrete section is deficient in thickness by more than 1/4 inch the deficient section shall be removed, between regularly scheduled joints, and replaced.

High Areas

In areas not meeting surface smoothness and plan grade requirements, high areas shall be reduced either by rubbing the freshly finished concrete with carborundum brick and water when the concrete is less than 36 hours old or by grinding the hardened concrete with an approved surface grinding machine after the concrete is 36 hours old or more. The area corrected by grinding the surface of the hardened concrete shall not exceed 5 percent of the area of any integral slab, and the depth of grinding shall not exceed 1/4 inch. Pavement areas requiring grade or surface smoothness corrections in excess of the limits specified above shall be removed and replaced.

Appearance

Exposed surfaces of the finished work shall be inspected by the Government and any deficiencies in appearance shall be identified. Areas which exhibit excessive cracking, discoloration, form marks, or tool marks or which are otherwise inconsistent with the overall appearances of the work shall be removed and replaced.

Detectable Warning System

Install Detectable Warning Systems if required per ICC A117.1, Section 705, and by manufacturers' installation instructions.

SECTION 15.0 CONCRETE FOR MINOR STRUCTURES REPLACEMENT

15.1 SCOPE OF WORK

Contractor shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish and install concrete, reinforcement, and related materials. The work includes:

1. Providing concrete consisting of portland cement, fine and coarse aggregates, water, and approved admixtures; combined, mixed, transported placed, finished, and cured.
2. Fabrication and placement of reinforcement, including ties and supports.
3. Design, erection, and removal of formwork.
4. Building into the concrete all sleeves, frames, anchors, inserts, and other items required to be embedded in the concrete.

15.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ACI INTERNATIONAL

ACI 304R	(2000) Guide for Measuring, Mixing, Transporting, and Placing Concrete
ACI 308R	(2001) Guide to Curing Concrete
ACI 318/318R	(2002) Building Code Requirements for Structural Concrete and Commentary
ACI 347	(2001) Guide to Formwork for Concrete

ASTM INTERNATIONAL

ASTM A 185	(2002) Steel Welded Wire Reinforcement, Plain, for Concrete
ASTM A 615/A 615M	(2003a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM C 143/C 143M	(2003) Slump of Hydraulic Cement Concrete
ASTM C 150	(2002ae1) Portland Cement
ASTM C 171	(2003) Sheet Materials for Curing Concrete
ASTM C 172	(1999) Sampling Freshly Mixed Concrete

ASTM INTERNATIONAL Continued

ASTM C 231	(2003) Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 260	(2001) Air-Entraining Admixtures for Concrete
ASTM C 309	(2003) Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 31/C 31M	(2003a) Making and Curing Concrete Test Specimens in the Field
ASTM C 33	(2003) Concrete Aggregates
ASTM C 39/C 39M	(2003) Compressive Strength of Cylindrical Concrete Specimens
ASTM C 494/C 494M	(1999ae1) Chemical Admixtures for Concrete
ASTM C 618	(2003) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 685	(2000) Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C 920	(2002) Elastomeric Joint Sealants
ASTM C 94/C 94M	(2003a) Ready-Mixed Concrete
ASTM D 1752	(1984; R 1996e1) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D 75	(2003) Sampling Aggregates
ASTM E 96	(2000e1) Water Vapor Transmission of Materials

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 400	(1963) Requirements for Water for Use in Mixing or Curing Concrete
COE CRD-C 572	(1974) Specifications for Polyvinylchloride Waterstops

15.3 DESIGN AND PERFORMANCE REQUIREMENTS

The Government shall maintain the option to sample and test joint sealer, joint filler material, waterstop, aggregates and concrete to determine compliance with the specifications. The Contractor shall provide facilities and labor as may be necessary to assist the Government in procurement of representative test samples. Samples of aggregates shall be obtained at the point of batching in accordance with ASTM D 75. Concrete shall be sampled in accordance with ASTM C 172. Slump and air content shall be determined in accordance with ASTM C 143/C 143M and ASTM C 231, respectively, when cylinders are molded. Compression test specimens shall be made, cured, and transported in accordance with ASTM C 31/C 31M. Compression test specimens shall be tested in accordance with ASTM C 39/C 39M. Samples for strength tests shall be taken not less than once each shift in which concrete is produced from each class of concrete required. A minimum of three specimens shall be made from each sample; two shall be tested at 28 days (90 days if pozzolan is used) for acceptance, and one shall be tested at 7 days for information.

Classification of Concrete

Class "A" concrete shall be steel reinforced and includes all concrete, unless indicated otherwise. Class "B" concrete shall be placed without forms or with simple forms, with little or no reinforcing and includes the following:

- a. Concrete fill.
- b. Unreinforced encasements.
- c. Thrust blocks.

Strength

Acceptance test results shall be the average strengths of two specimens tested at 28 days (90 days if pozzolan is used). The strength of the concrete shall be considered satisfactory so long as the average of three consecutive acceptance test results equal or exceed the specified compressive strength (f'_c), and no individual acceptance test result falls below f'_c by more than 500 psi.

Construction Tolerances

A Class "C" finish shall apply to all surfaces except those specified to receive a Class "D" finish. A Class "D" finish shall apply to all surfaces which shall be permanently concealed after construction. The surface requirements for the classes of finish required shall be as specified in American Concrete Institute (ACI) 347.

Concrete Mixture Proportions

Concrete mixture proportions shall be the responsibility of the Contractor. Mixture proportions shall include the dry weights of cementitious material(s); the nominal maximum size of the coarse aggregate; the specific gravities, absorptions, and saturated surface-dry weights of fine and coarse aggregates; the quantities, types, and names of admixtures; and quantity of water per cubic yard of concrete. All materials included in the mixture proportions shall be of the same type and from the same source as shall be used on the project.

General

- a. Normal weight: 145 pounds per cubic foot.
- b. Use air entraining admixture in all concrete: Provide not less than four percent, nor more than eight percent, entrained air for concrete exposed to freezing and thawing and from three percent to five percent for other concrete.

Proportioning and Design of Class "A" Mix

- a. Minimum compressive strength at 28 days (f_c'): 4,000 psi.
- b. Maximum water cement ratio by weight: 0.45.
- c. Minimum cement content: 564 pounds per cubic yard.

Proportioning and Design of Class "B" Mix

- a. Minimum compressive strength at 28 days (f_c'): 3,000 psi.
- b. Maximum water cement ratio by weight: 0.50.
- c. Minimum cement content: 517 pounds per cubic yard.

Slump Limits

Proportion and design mixes to result in concrete slump at the point of placement of not less than 1-inch and not more than 4-inches.

15.4 MATERIALS

Cementitious Materials

Cementitious materials shall conform to the appropriate specifications listed below:

Portland Cement

ASTM C 150, Type II. Type I may be used in lieu of Type II when acceptable to the Government. Contractor shall use portland cement made by a well-known manufacturer and produced by not more than one plant. Alternate cement sources may be used provided that a mix design has been accepted and a trial batch verifying performance has been made.

Pozzolan

Pozzolan shall conform to ASTM C 618, Class C or F, including requirements of Tables 1A and 2A.

Aggregates

Aggregates shall meet the quality and grading requirements of ASTM C 33 Class Designations 4M or better. Contractor shall use air-entraining admixture in all concrete, unless otherwise shown or specified. The Contractor shall use air-entraining admixture at the manufacturer's prescribed rate to result in concrete at the point of placement having air content within the prescribed limits.

Admixtures

Admixtures to be used shall comply with the appropriate specification listed. Chemical admixtures that have been in storage at the project site for longer than 6 months or that have been subjected to freezing

shall be retested at the expense of the Contractor at the request of the Government and shall be rejected if test results are not satisfactory.

Air-Entraining Admixture

Air-entraining admixture shall meet the requirements of ASTM C 260.

Accelerating Admixture

Other accelerators shall meet the requirements of ASTM C 494/C 494M, Type D or E.

Water-Reducing or Retarding Admixture

Water-reducing or retarding admixture shall meet the requirements of ASTM C 494/C 494M, Type D or E.

Admixture Containing Chloride Ions

Calcium chloride or admixtures containing chloride ions shall not be used.

Water

Water for mixing and curing shall be fresh, clean, potable, and free from injurious amounts of oil, acid, salt, or alkali, except that unpotable water may be used if it meets the requirements of Corps of Engineers (COE) CRD-C 400.

Reinforcing Steel

Reinforcing steel bar shall conform to the requirements of ASTM A 615/A 615M, Grade 60. Welded steel wire fabric shall conform to the requirements of ASTM A 185. Details of reinforcement not shown shall be in accordance with ACI 318/318R, Chapters 7 and 12.

Expansion Joint Filler Strips, Premolded

Expansion joint filler strips, premolded shall be sponge rubber conforming to ASTM D 1752, Type I.

Joint Sealants - Field Molded Sealants

Joint sealants - field molded sealants shall conform to ASTM C 920, Type M, Grade NS, Class 25, Contractor shall use NT for vertical joints and Type M, Grade P, Class 25, Contractor shall use T for horizontal joints. Bond-breaker material shall be polyethylene tape, coated paper, metal foil, or similar type materials. The backup material shall be compressible, nonshrink, nonreactive with the sealant, and a nonabsorptive material such as extruded butyl or polychloroprene foam rubber. Immediately prior to installation of field-molded sealants, the joint shall be cleaned of all debris and further cleaned using water, chemical solvents, or other means as recommended by the sealant manufacturer or directed.

Waterstops

Waterstops shall conform to COE CRD-C 572.

Formwork

The design and engineering of the formwork as well as its construction, shall be the responsibility of the Contractor.

Form Coatings

Forms for exposed surfaces shall be coated with a nonstaining form oil, which shall be applied shortly before concrete is placed.

Vapor Barrier

Vapor barrier shall be polyethylene sheeting with a minimum thickness of 6 mils or other equivalent material having a vapor permeance rating not exceeding 0.5 perms as determined in accordance with ASTM E 96.

Curing Materials

Curing materials shall conform to the following requirements.

Impervious Sheet Materials

Impervious sheet materials, ASTM C 171, type optional, except polyethylene film, if used, shall be white opaque.

Membrane-Forming Curing Compound

Membrane-forming curing compound shall be ASTM C 309, Type 1-D or 2, Class A.

15.5 PREPARATION

General

Construction joints shall be prepared to expose coarse aggregate, and the surface shall be clean, damp, and free of laitance. Ramps and walkways, as necessary, shall be constructed to allow safe and expeditious access for concrete and workmen. Snow, ice, standing or flowing water, loose particles, debris, and foreign matter shall have been removed. Earth foundations shall be satisfactorily compacted. Spare vibrators shall be available. The entire preparation shall be accepted by the Government prior to placing.

Embedded Items

Reinforcement shall be secured in place; joints, anchors, and other embedded items shall have been positioned. Internal ties shall be arranged so that when the forms are removed the metal part of the tie shall be not less than 2 inches from concrete surfaces permanently exposed to view or exposed to water on the finished structures. Embedded items shall be free of oil and other foreign matters such as loose coatings or rust, paint, and scale. The embedding of wood in concrete shall be permitted only when specifically authorized or directed. All equipment needed to place, consolidate, protect, and cure the concrete shall be at the placement site and in good operating condition.

Formwork Installation

Forms shall be properly aligned, adequately supported, and mortar-tight. The form surfaces shall be smooth and free from irregularities, dents, sags, or holes when used for permanently exposed faces. All exposed joints and edges shall be chamfered, unless otherwise indicated.

Vapor Barrier Installation

Vapor barriers shall be applied over gravel fill. Edges shall be lapped not less than 6 inches. All joints shall be sealed with pressure-sensitive adhesive not less than 2 inches wide. The vapor barrier shall be protected at all times to prevent injury or displacement prior to and during concrete placement.

Production of Concrete

Ready-Mixed Concrete

Ready-mixed concrete shall conform to ASTM C 94/C 94M except as otherwise specified.

Concrete Made by Volumetric Batching and Continuous Mixing

Concrete made by volumetric batching and continuous mixing shall conform to ASTM C 685.

Waterstops

Waterstops shall be installed and spliced as directed by the manufacturer.

15.6 CONVEYING AND PLACING CONCRETE

Conveying and placing concrete shall conform to the following requirements.

General

Concrete placement shall not be permitted when weather conditions prevent proper placement and consolidation without approval. When concrete is mixed and/or transported by a truck mixer, the concrete shall be delivered to the site of the work and discharge shall be completed within 1-1/2 hours or 45 minutes when the placing temperature is 85 degrees F or greater unless a retarding admixture is used. Concrete shall be conveyed from the mixer to the forms as rapidly as practicable by methods which prevent segregation or loss of ingredients. Concrete shall be in place and consolidated within 15 minutes after discharge from the mixer. Concrete shall be deposited as close as possible to its final position in the forms and be so regulated that it may be effectively consolidated in horizontal layers 18 inches or less in thickness with a minimum of lateral movement. The placement shall be carried on at such a rate that the formation of cold joints shall be prevented. Place concrete in a continuous operation within planned joints or sections complying with the requirements of ACI 304R.

Consolidation

Each layer of concrete shall be consolidated by internal vibrating equipment supplemented by hand-spading, rodding or tamping. Internal vibration shall be systematically accomplished by inserting the vibrator through the fresh concrete in the layer below at a uniform spacing over the entire area of placement. The distance between insertions shall be approximately 1.5 times the radius of action of the vibrator and overlay the adjacent, just-vibrated area by a few inches. The vibrator shall penetrate rapidly to the bottom of the layer and at least 6 inches into the layer below, if such a layer exists. It shall be held

stationary until the concrete is consolidated and then withdrawn slowly at the rate of about 3 inches per second.

Cold-Weather Requirements

No concrete placement shall be made when the ambient temperature is below 35 degrees F or if the ambient temperature is below 40 degrees F and falling. Suitable covering and other means as approved shall be provided for maintaining the concrete at a temperature of at least 50 degrees F for not less than 72 hours after placing and at a temperature above freezing for the remainder of the curing period. Salt, chemicals, or other foreign materials shall not be mixed with the concrete to prevent freezing. Any concrete damaged by freezing shall be removed and replaced at the expense of the Contractor.

Hot-Weather Requirements

When the rate of evaporation of surface moisture, as determined by use of Figure 1 of ACI 308R, is expected to exceed 0.2 pound per square foot per hour, provisions for windbreaks, shading, fog spraying, or covering with a light-colored material shall be made in advance of placement, and such protective measures shall be taken as quickly as finishing operations shall allow.

15.7 FORM REMOVAL

Forms shall not be removed before the expiration of 24 hours after concrete placement except where otherwise specifically authorized. Supporting forms and shoring shall not be removed until the concrete has cured for at least 5 days. When conditions on the work are such as to justify the requirement, forms shall be required to remain in place for longer periods.

15.8 FINISHING

General

No finishing or repair shall be done when either the concrete or the ambient temperature is below 50 degrees F.

Finishing Formed Surfaces

All fins and loose materials shall be removed, and surface defects including tie holes shall be filled. All honeycomb areas and other defects shall be repaired. All unsound concrete shall be removed from areas to be repaired. Surface defects greater than 1/2 inch in diameter and holes left by removal of tie rods in all surfaces not to receive additional concrete shall be reamed or chipped and filled with dry-pack mortar. The prepared area shall be brush-coated with an approved epoxy resin or latex bonding compound or with a neat cement grout after dampening and filled with mortar or concrete. The cement used in mortar or concrete for repairs to all surfaces permanently exposed to view shall be a blend of portland cement and white cement so that the final color when cured shall be the same as adjacent concrete.

Finishing Unformed Surfaces

All unformed surfaces that are not to be covered by additional concrete or backfill shall be float finished to elevations shown, unless otherwise specified. Surfaces to receive additional concrete or backfill shall be brought to the elevations shown and left as a true and regular surface. Exterior surfaces shall be sloped for drainage unless otherwise shown. Joints shall be carefully made with a jointing

tool. Unformed surfaces shall be finished to a tolerance of 3/8 inch for a float finish and 5/16 inch for a trowel finish as determined by a 10-foot straightedge placed on surfaces shown on the plans to be level or having a constant slope. Finishing shall not be performed while there is excess moisture or bleeding water on the surface. No water or cement shall be added to the surface during finishing.

Float Finish

Surfaces to be float finished shall be screeded and darbyed or bullfloated to eliminate the ridges and to fill in the voids left by the screed. In addition, the darby or bullfloat shall fill all surface voids and only slightly embed the coarse aggregate below the surface of the fresh concrete. When the water sheen disappears and the concrete shall support a person's weight without deep imprint, floating should be completed. Floating should embed large aggregates just beneath the surface, remove slight imperfections, humps, and voids to produce a plane surface, compact the concrete, and consolidate mortar at the surface.

Trowel Finish

A trowel finish shall be applied on interior exposed slabs, unless otherwise shown or specified, on slabs to receive resilient floor finishes, and where indicated. Trowelling shall be done immediately following floating to provide a smooth, even, dense finish free from blemishes including trowel marks. Finished surfaces shall be protected from damage during the construction period.

Broom Finish

A broom finish shall be applied to all exterior exposed horizontal surfaces subject to light foot traffic, sidewalks, interior and exterior concrete steps and ramps, horizontal surfaces which shall receive a grout topping or a concrete equipment base slab, and where indicated. The concrete shall be screeded and floated to required finish plane with no coarse aggregate visible. After surface moisture disappears, the surface shall be broomed or brushed with a broom or fiber bristle brush in a direction transverse to that of the main traffic or as directed.

Expansion and Contraction Joints

Expansion and contraction joints shall be made in accordance with the details shown or as otherwise specified. Provide 1/2 inch thick transverse expansion joints where new work abuts an existing concrete. Expansion joints shall be provided at a maximum spacing of 30 feet on center in sidewalks, unless otherwise indicated, and spaced as indicated in slabs. Contraction joints shall be provided at a maximum spacing of 6 linear feet in sidewalks, unless otherwise indicated, and spaced as indicated in slabs. Contraction joints shall be cut at a minimum of 1 inch(es) deep with a jointing tool after the surface has been finished.

15.9 CURING AND PROTECTION

Beginning immediately after placement and continuing for at least 7 days, all concrete shall be cured and protected from premature drying, extremes in temperature, rapid temperature change, freezing, mechanical damage, and exposure to rain or flowing water. All materials and equipment needed for adequate curing and protection shall be available and at the site of the placement prior to the start of concrete placement. Preservation of moisture for concrete surfaces not in contact with forms shall be accomplished by one of the following methods:

- a. Continuous sprinkling or ponding

- b. Application of absorptive mats or fabrics kept continuously wet.
- c. Application of sand kept continuously wet.
- d. Application of impervious sheet material conforming to ASTM C 171.
- e. Application of membrane-forming curing compound conforming to ASTM C 309, Type 1-D, on surfaces permanently exposed to view and Type 2 on other surfaces shall be accomplished in accordance with manufacturer's instructions.

The preservation of moisture for concrete surfaces placed against wooden forms shall be accomplished by keeping the forms continuously wet for 7 days. If forms are removed prior to end of the required curing period, other curing methods shall be used for the balance of the curing period. During the period of protection removal, the temperature of the air in contact with the concrete shall not be allowed to drop more than 25 degrees F within a 24 hour period.

15.10 TESTS AND INSPECTIONS

General

The individuals who sample and test concrete as required in this specification shall have demonstrated a knowledge and ability to perform the necessary test procedures equivalent to the ACI minimum guidelines for certification of Concrete Field Testing Technicians, Grade I.

Inspection Details and Frequency of Testing

Preparations for Placing

Foundation or construction joints, forms, and embedded items shall be inspected in sufficient time prior to each concrete placement by the Contractor to certify that it is ready to receive concrete.

Concrete Testing

Concrete testing shall meet the requirement of Appendix J, CONCRETE SIDEWALKS AND CURBS AND GUTTERS SPECIFICATION.

Action Required

Placing

The placing foreman shall not permit placing to begin until he has verified that an adequate number of acceptable vibrators, which are in working order and have competent operators, are available. Placing shall not be continued if any pile is inadequately consolidated.

Air Content

Whenever a test result is outside the specification limits, the concrete shall not be delivered to the forms and an adjustment shall be made to the dosage of the air-entrainment admixture.

Slump

Whenever a test result is outside the specification limits, the concrete shall not be delivered to the forms and an adjustment should be made in the batch weights of water and fine aggregate. The adjustments are to be made so that the water-cement ratio does not exceed that specified in the submitted concrete mixture proportion.

Reports

The results of all tests and inspections conducted at the project site shall be reported informally at the end of each shift and in writing weekly and shall be delivered within 3 days after the end of each weekly reporting period. See Section 21.0 CONTRACTOR QUALITY CONTROL.

SECTION 16.0 TOPSOIL REPLACEMENT

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 32 92 19 LOAMING AND SEEDING.

Provide 4 inches of topsoil to meet indicated finish grade. After areas have been brought to indicated finish grade, incorporate fertilizer, pH adjusters, and soil conditioners into soil a minimum depth of 4 inches by disking, harrowing, tilling, or other method approved by the Government. Remove debris and stones larger than 3/4 inch in any dimension remaining on the surface after finish grading. Correct irregularities in finish surfaces to eliminate depressions. Protect finished topsoil areas from damage by vehicular or pedestrian traffic. Topsoil shall be placed a maximum of 2 weeks prior to planting and within the planting season.

SECTION 17.0 SODDING

Following topsoil emplacement, the Contractor shall procure the labor and materials to install sod at each of the OU4 properties. Activities include:

- Sod transport, delivery, and storage.
- Protection of sod while stored.
- Sod cutting, placement, rolling.
- Watering.
- Submittal and approval of sod and sod fertilizer.
- Submittal and approval of nursery or sod farm certification.

Due to a potential project schedule where some of the fieldwork could occur during the winter months, a second mobilization may be required to complete the balance of the work at the beginning of the next growing season. This work and product shall be contracted such that watering and warranty flow down to the subcontractor.

17.1 SCOPE OF WORK

Contractor shall provide all labor, materials, tools, equipment and incidentals as shown, specified and required to furnish and install all sod as shown, specified, and required for site restoration. Types of products required include topsoil, sod, inorganic soil amendments, organic soil amendments, fertilizers, mulches, erosion-control materials, and accessories.

17.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

TURFGRASS PRODUCERS INTERNATIONAL (TPI)

TPI GSS	(1995) Guideline Specifications for Sodding
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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 602	(1995a; R 2001) Agricultural Liming Materials
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ASTM D 4427	(1992; R 2002) Peat Samples by Laboratory Testing
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SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that shall review the submittal for the Government. Architect-Engineer approval is required for submittals with an "AE" designation. Resident Office approval is for submittals with a "RO" designation. Submit the following in accordance with Section 24.0 SUBMITTAL PROCEDURES:

SD-03 Product Data

- Fertilizer
Include physical characteristics, and recommendations.

SD-07 Certificates

- Nursery and Sod farm certification for sods. Indicate type of sod in accordance with TPI GSS; G

17.3 DEFINITIONS

Stand of Turf

100 percent ground cover of the established species.

17.4 RELATED REQUIREMENTS

Section 11.0 EXCAVATION, Section 12.0 BACKFILL AND COMPACTION, Section 18.0 EXTERIOR PLANT REPLACEMENT SPECIFICATION applies to this section for pesticide use and plant establishment requirements, with additions and modifications herein.

17.5 DELIVERY, STORAGE, AND HANDLING

Delivery

Sod Protection

Contractor shall protect sod from drying out and from contamination during delivery, on-site storage, and handling. The Contractor shall not schedule sod delivery until site conditions are ready for installation.

Fertilizer, Gypsum, Sulfur, Iron, and Lime Delivery

Deliver to the site in original, unopened containers bearing manufacturer's chemical analysis, name, trade name, trademark, and indication of conformance to state and federal laws. Instead of containers, fertilizer, gypsum, sulphur, iron, and lime may be furnished in bulk with certificate indicating the above information.

Storage

Sod Storage

Contractor shall lightly sprinkle with water, cover with moist burlap, straw, or other approved covering; and protect from exposure to wind and direct sunlight until planted. The Contractor shall provide covering that shall allow air to circulate so that internal heat shall not develop. Contractor shall not store sod longer than 24 hours. The Contractor shall not store sod directly on concrete or bituminous surfaces.

Topsoil

Prior to stockpiling topsoil, Contractor shall treat growing vegetation with application of appropriate specified non-selective herbicide. The Contractor shall clear and grub existing vegetation three to four weeks prior to stockpiling topsoil.

Handling

Contractor shall not drop or dump sodding materials from vehicles.

17.6 TIME RESTRICTIONS AND PLANTING CONDITIONS

Planting Restrictions

Contractor shall not place sod when the ground is frozen, snow covered, muddy, or when air temperature exceeds 90 degrees Fahrenheit.

Time Limitations

Sod

Contractor shall place sod a maximum of thirty six hours after initial harvesting, in accordance with TPI GSS as modified herein.

17.7 SOURCE QUALITY CONTROL

Contractor shall provide sod procured from areas having growing conditions similar to location of Site.

Sod shall be machine cut into rectangular sections, exercising care to retain the native soil on the roots of the sod, during stripping, transportation and planting. Rectangular sections of sod may vary in length but shall be equal in width and of a size that permits the sod to be lifted and rolled without breaking.

Contractor shall cut and move sod only when soil moisture conditions are such that favorable results can be expected.

17.8 PRODUCTS

Sod

Classification

Sod shall be nursery grown, certified as classified in the TPI GSS. Machine cut sod at a uniform thickness of 3/4 inch within a tolerance of 1/4 inch, excluding top growth and thatch. Each individual sod piece shall be strong enough to support its own weight when lifted by the ends. Broken pads, irregularly shaped pieces, and torn or uneven ends shall be rejected. Wood pegs and wire staples for anchorage shall be as recommended by sod supplier.

Purity

Sod species shall be genetically pure, free of weeds, pests, and disease.

Planting Dates

Contractor shall lay sod from April 15 to June 1 for warm season spring planting and from September 1 to October 30 for cool season fall planting.

Composition

Proportion

Sod shall preferably contain grass species proportioned as follows:

Botanical Name	Common Name	Percent
Poa Pratensis Var. A-34	A-34 Kentucky Bluegrass	34
Poa Pratensis Var. Midnight	Midnight Kentucky Bluegrass	33
Poa Pratensis Var. Glade	Glade Kentucky Bluegrass	33

Contractor shall obtain Government approval to provide sod with an alternative blend of grass species.

17.9 TOPSOIL

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 32 92 00 LOAMING AND SEEDING and Section 16.0 TOP SOIL PLACEMENT.

17.10 SOIL CONDITIONERS

Contractor shall add conditioners to topsoil as required to bring into compliance with "composition" standard for topsoil as specified in Section 16.0 TOPSOIL REPLACEMENT.

17.11 PREPARATION

Extent of Work

Contractor shall provide soil preparation (including soil conditioners as required), fertilizing, seeding, and surface topdressing of all newly graded finished earth surfaces, unless indicated otherwise, and at all areas inside or outside the limits of construction that are disturbed by the Contractor's operations.

Topsoil

Contractor shall provide 4 inches of off-site topsoil to meet indicated finish grade. After areas have been brought to indicated finish grade, the Contractor shall incorporate fertilizer, pH adjusters, and soil conditioners into soil a minimum depth of 4 inches by disking, harrowing, tilling or other method approved by the Government. Contractor shall remove debris and stones larger than 3/4 inch in any dimension remaining on the surface after finish grading. The Contractor shall correct irregularities in finish surfaces to eliminate depressions. Contractor shall protect finished topsoil areas from damage by vehicular or pedestrian traffic. Topsoil shall be placed a maximum of 2 weeks prior to planting and within the planting season.

Prior to the commencement of the seeding operation, the Contractor shall verify that finished grades are as indicated on drawings; the placing of topsoil, smooth grading, and compaction requirements have been completed in accordance with Section 11.0 EXCAVATION and Section 12.0 BACKFILL AND COMPACTION.

The prepared surface shall be a maximum 1 inch below the adjoining grade of any surfaced area. New surfaces shall be blended to existing areas. The prepared surface shall be completed with a light raking to remove from the surface debris and stones over a minimum 5/8 inch in any dimension.

Soil Conditioner Application Rates

Contractor shall apply soil conditioners at rates as determined by laboratory soil analysis of the soils at the job site.

Fertilizer Application Rates

Contractor shall apply fertilizer at rates as determined by laboratory soil analysis of the soils at the job site.

17.12 SODDING

Finished Grade and Topsoil

Prior to the commencement of the sodding operation, the Contractor shall verify that finished grades are as indicated on drawings; the placing of topsoil, smooth grading, and compaction requirements have been completed in accordance with Section 11.0 EXCAVATION and Section 12.0 BACKFILL AND COMPACTION.

The prepared surface shall be a maximum 1 inch below the adjoining grade of any surfaced area. New surfaces shall be blended to existing areas. The prepared surface shall be completed with a light raking to remove from the surface debris and stones over a minimum 5/8 inch in any dimension.

Placing

Contractor shall place sod a maximum of 36 hours after initial harvesting. The Contractor shall lay sod to form a solid mass with tightly fitted joints. Contractor shall butt ends and sides of sod strips; they shall not overlap. Contractor shall stagger strips to offset joints in adjacent courses and work from boards to avoid damage to subgrade or sod.

Sodding Slopes and Ditches

For slopes 2:1 and greater, Contractor shall lay sod with long edge perpendicular to the contour. For V-ditches and flat bottomed ditches, Contractor shall lay sod with long edge perpendicular to flow of water. The Contractor shall anchor each piece of sod, as necessary, with wood pegs or wire staples maximum 2 feet on center. On slope areas, Contractor shall start sodding at bottom of the slope.

Finishing

After completing sodding, Contractor shall blend edges of sodded area smoothly into surrounding area. Air pockets shall be eliminated and a true and even surface shall be provided. Frayed edges shall be trimmed and holes and missing corners shall be patched with sod.

Rolling

Immediately after sodding, Contractor shall firm the entire area except for slopes in excess of 3 to 1 with a roller not exceeding 90 pounds for each foot of roller width.

Watering

During the first week, the Contractor shall water sod daily or more frequently as necessary, and thereafter as required by daily temperature and wind conditions at a rate sufficient to ensure thorough wetting of soil to minimum depth of 6 inches. Run-off, puddling, and wilting shall be prevented. Unless otherwise directed, watering trucks shall not be driven over turf areas. Watering of other adjacent areas or plant material shall be prevented by the Contractor.

17.13 PROTECTION OF TURF AREAS

Immediately after turfing, the Contractor shall protect the area against traffic and other use.

17.14 RESTORATION

Contractor shall restore to original condition existing turf areas which have been damaged during turf installation operations. The Contractor shall keep clean at all times at least one paved pedestrian access route and one paved vehicular access route to each house. Contractor shall clean other paving when work in adjacent areas is complete.

17.15 SOD ESTABLISHMENT PERIOD**Commencement**

The sod establishment period to obtain a healthy stand of grass plants shall end 3 months after the last day of the sodding operation. Written calendar time period shall be furnished by the Contractor for the sod establishment period. When there is more than 1 sod establishment period, the boundaries of the sodded area covered for each period shall be described. The sod establishment period shall be modified for inclement weather, shut down periods, or for separate completion dates of areas.

Satisfactory Stand of Grass Plants

Grass plants shall be evaluated for species and health. A satisfactory stand of grass plants from the sodding operation shall be living sod uniform in color and leaf texture. Bare spots shall be a maximum 2 inches square. Joints between sod pieces shall be tight and free from weeds and other undesirable growth.

Maintenance During Establishment Period

Maintenance of the sodded areas shall include eradicating weeds, insects and diseases; protecting embankments and ditches from surface erosion; maintaining erosion control materials and mulch; protecting installed areas from traffic; mowing; watering; and post-fertilization.

Mowing

Areas shall be mowed to a minimum 3-inch height when the turf is a maximum 4 inches high. Clippings shall be removed when the amount cut prevents sunlight from reaching the ground surface.

Watering

Source of water shall be approved by the Government and of suitable quality for irrigation, containing no elements toxic to plant life.

Post-Fertilization

A maximum 1/2 pound per 1000 square feet of actual available nitrogen shall be provided to the grass plants. The application shall be timed prior to the advent of winter dormancy and shall be made without burning the installed grass plants.

Repair or Reinstall

Unsatisfactory stand of grass plants and mulch shall be repaired or reinstalled, and eroded areas shall be repaired by the Contractor in accordance with paragraph PREPARATION.

Maintenance Record

A record of each site visit shall be furnished, describing the maintenance work performed; areas repaired or reinstalled, and diagnosis for unsatisfactory stand of grass plants

SECTION 18.0 EXTERIOR PLANTS REPLACEMENT

All of the OU4 properties include exterior plants that shall require removal prior to soil excavation. Arboreal Survey data for the OU4 properties are in Appendix D. As part of the site restoration, these plants shall be replaced as specified herein. A local subcontractor shall likely be required to furnish and install the plants. Subcontractor shall use pre-construction photo documentation of each property to establish the minimum requirements for what is to be furnished.

Contractor shall provide all labor, materials, tools, equipment and incidentals as shown, specified and required to furnish and install exterior plants for site restoration. Types of products required include: shade and flowering trees, deciduous shrubs, coniferous evergreen trees and shrubs, broadleaf evergreen trees and shrubs, vines and ground cover plants, bulbs, corms, tubers and rhizomes, herbaceous and woody perennials, securement and protection accessories, topsoil, organic and inorganic topsoil amendments, fertilizers, mulches and weed-control barriers, erosion-control material, and accessories.

18.1 REERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICANHORT (AH)	
ANSI/ANLA Z60.1	(2004; Revision 2014) American Standard for Nursery Stock
AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)	
ANSI A 300	(1995) Tree Care Operations - Tree, Shrub
and	Other Woody Plant Maintenance - Standard Practices
ANSI Z133.1	(2001) Tree Care Operations - Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush
ANSI Z60.1	(1996) American Standard for Nursery Stock
AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)	
ASTM A 580/A 580M	(2018) Standard Specification for Stainless Steel Wire
ASTM C 602	(1995a; R 2001) Agricultural Liming Materials
ASTM D 4427	(2018) Standard Classification of Peat Samples by Laboratory Testing
ASTM D 4972	(2001) pH of Soils

L.H. BAILEY HORTORIUM (LHBH)

LHBH

(1976) Hortus Third

TREE CARE INDUSTRY ASSOCIATION (TCIA)

TCIA A300P1

(2008; R 2017) ANSI A300 Part1: Tree Care Operations
- Trees, Shrubs and Other Woody Plant Maintenance
Standard Practices - Pruning

TCIA Z133

(2006; R 2017) American National Standard for
Arboricultural Operations - Safety Requirements

SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that shall review the submittal for the Government. Architect-Engineer approval is required for submittals with an "AE" designation. Resident Office approval is for submittals with a "RO" designation. Submit the following in accordance with Section 24.0 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- State Landscape Contractor's License
- Time Restrictions and Planting Conditions
- Indicate anticipated dates and locations for each type of planting.

SD-03 Product Data

- Peat
- Composted Derivatives
- Rotted Manure
- Mulch

Submit documentation indicating type of biobased material in product and biobased content. Indicate relative dollar value of biobased content products to total dollar value of products included in project.

- Gypsum
- Mulch; G
- Ground Stakes
- Fertilizer
- Weed Control Fabric
- Staking Material
- Metal anchors
- Antidesiccants
- Erosion control materials
- Photographs; G

SD-04 Samples

- Mulch; G
Submit one pint of mulch.

SD-07 Certificates

- Nursery certifications

Indicate names of plants in accordance with the LHBH, including type, quality, and size.

18.2 RELATED REQUIREMENTS

Section 11.0 BACKFILL AND COMPACTION and Section 17.0 SODDING apply to this section for pesticide use and plant establishment requirements, with additions and modifications herein.

18.3 QUALITY ASSURANCE

Topsoil Composition Tests

Contractor shall arrange for topsoil composition testing at an independent laboratory including basic soil groups (moisture and saturation percentages, Nitrogen-Phosphorus-Potassium (N-P-K) ratio, pH (ASTM D 4972), soil salinity, secondary nutrient groups (calcium, magnesium, sodium, Sodium Absorption Ratio (SAR)), micronutrients (zinc, manganese, iron, copper), toxic soil elements (boron, chloride, sulfate), cation exchange and base saturation percentages, and soil amendment and fertilizer recommendations with quantities for plant material being transplanted. Soil required for each test shall include a maximum depth of 18 inches of approximately 1 quart volume for each test. Areas sampled should not be larger than 1 acre and should contain at least 6-8 cores for each sample area and be thoroughly mixed. Problem areas should be sampled separately and compared with samples taken from adjacent non-problem areas. The location of the sample areas should be noted and marked on a parcel or planting map for future reference.

Nursery Certifications

- a. Indicate on nursery letterhead the name of plants in accordance with the LHBH, including botanical common names, quality, and size.
- b. Inspection certificate.

State Landscape Contractor's License

Subcontractor shall hold a landscape contractors license in the State of New York where the work is performed and have a minimum of five years landscape construction experience. Subcontractor shall submit copy of the license and three references for similar work completed in the last five years.

Plant Material Photographs

Contractor shall submit nursery photographs, for government approval prior to ordering, for each tree larger than 24-inch box/ 2-inch caliper size.

Pre-Installation Meeting

Convene a pre-installation meeting a minimum of one week prior to commencing work of this section. Require attendance of parties directly affecting work of this section. Review conditions of operations, procedures, and coordination with related work. Agenda shall include the following:

- a. Tour, inspect, and discuss conditions of planting materials.

- b. Review planting schedule and maintenance.
- c. Review required inspections.
- d. Review environmental procedures.

18.4 DELIVERY, STORAGE, AND HANDLING

Delivery

Branched Plant Delivery

Subcontractor shall deliver with branches tied and exposed branches covered with material which allows air circulation. Subcontractor shall prevent damage to branches, trunks, root systems, and root balls and desiccation of leaves.

Soil Amendment Delivery

Subcontractor shall deliver to the site in original, unopened containers bearing manufacturer's chemical analysis, name, trade name, or trademark, and indication of conformance to state and federal laws. Instead of containers, fertilizer, gypsum, and lime may be furnished in bulk with a certificate indicating the above information. Subcontractor shall store in dry locations away from contaminants.

Plant Labels

Subcontractor shall deliver plants with durable waterproof labels in weather-resistant ink. Subcontractor shall provide labels stating the correct botanical plant name and variety as applicable and size as specified in the list of required plants. Labels shall be attached to plants, bundles, and containers of plants. Groups of plants may be labeled by tagging one plant. Labels shall be legible for a minimum of 60 days after delivery to the planting site.

Storage

Plant Storage and Protection

Subcontractor shall temporarily store and protect plants not planted on the day of arrival at the site as follows:

- a. Shade and protect plants in outside storage areas from the wind and direct sunlight until planted.
- b. Heel-in bare root plants.
- c. Protect balled and burlapped plants from freezing or drying out by covering the balls or roots with moist burlap, sawdust, wood chips, shredded bark, peat moss, or other approved material. Provide covering which allows air circulation.
- d. Keep plants in a moist condition until planted by watering with a fine mist spray.
- e. Do not store plant material directly on concrete or bituminous surfaces.

Fertilizer, Gypsum, pH Adjusters and Mulch Storage

Subcontractor shall store in dry locations away from contaminants.

Topsoil

Prior to stockpiling topsoil, subcontractor shall eradicate on site undesirable growing vegetation. Subcontractor shall clear and grub existing vegetation three to four weeks prior to stockpiling topsoil.

Handling

Subcontractor shall not drop or dump plants from vehicles. The subcontractor shall avoid damaging plants being moved from nursery or storage area to planting site. Subcontractor shall handle plants carefully to avoid damaging or breaking the earth ball or root structure. Subcontractor shall not handle plants by the trunk or stem. The subcontractor shall remove damaged plants from the site.

18.5 TIME LIMITATION

Except for container-grown plant material, the time limitation from digging to installing plant material shall be a maximum of 90 days. The time limitation between installing the plant material and placing the mulch shall be a maximum of 24 hours.

18.6 TIME RESTRICTIONS AND PLANTING CONDITIONS

Planting Dates

Subcontractor shall plant or install plants and materials only during normal planting season for the particular plant installed. The subcontractor shall plant during one of the following periods:

Spring Planting:	March 15 to June 15
Fall Planting:	September 1 to October 30

Restrictions

Subcontractor shall not plant when ground is frozen, snow covered, muddy, or when air temperature exceeds 90 degrees Fahrenheit.

18.7 GUARANTEE

All plants shall be guaranteed for one year beginning on the date of inspection by the Government to commence the plant establishment period. The Contractor is required to provide maintenance throughout this one-year period to address fluctuating weather and precipitation patterns. Subcontractor shall replace plants that are more than 25 percent decayed or in an unhealthy condition at the end of the guarantee period. Provide photographs of the plants before removal, before planting new plants, after restoration, and after the guarantee period provided in this specification.

Local/Regional Materials

Use plant materials grown in a similar climatic condition and within a 500 mile radius from the project site; if available from a minimum of three sources.

18.8 PLANTS

Regulations and Varieties

Subcontractor shall furnish nursery stock in accordance with ANSI Z60.1, except as otherwise specified or indicated. Each plant or group of planting shall have a "key" number indicated on the nursery certifications of the plant schedule. The subcontractor shall furnish plants grown under climatic conditions similar to those in the locality of the project. Plants of the same specified size shall be of uniform size and character of growth. All plants shall comply with all Federal and State Laws requiring inspection for plant diseases and infestation.

Subcontractor shall provide plants grown in a recognized nursery in accordance with good horticultural practice, with healthy root systems developed by transplanting or root pruning. The subcontractor shall provide healthy, vigorous exterior plants growth for at least two years under climatic conditions similar to conditions in the locality of the project and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions or disfigurement.

Shape and Condition

Well-branched, well-formed, sound, vigorous, healthy planting stock free from disease, sunscald, windburn, abrasion, and harmful insects or insect eggs and having a healthy, normal, and undamaged root system.

Deciduous Trees and Shrubs

Symmetrically developed and of uniform habit of growth, with straight boles or stems, and free from objectionable disfigurements.

Evergreen Trees and Shrubs

Well developed symmetrical tops with typical spread of branches for each particular species or variety.

Ground Covers and Vines

Number and length of runners and clump sizes indicated, and of the proper age for the grade of plants indicated, furnished in removable containers, integral containers, or formed homogeneous soil section.

Plant Size

Minimum sizes measured after pruning and with branches in normal position, shall conform to measurements indicated, based on the average width or height of the plant for the species as specified in ANSI Z60.1. Plants larger in size than specified may be provided with approval of the Government. When larger plants are provided, increase the ball of earth or spread of roots in accordance with ANSI Z60.1.

Root Ball Size

All box-grown, field potted, field boxed, collected, plantation grown, bare root, balled and burlapped, container grown, processed-balled, and in-ground fabric bag-grown root balls shall conform to ANSI Z60.1. All wrappings and ties shall be biodegradable. Root growth in container grown plants shall be sufficient to hold earth intact when removed from containers. Root bound plants shall not be accepted.

Growth of Trunk and Crown

Deciduous Trees

A height to caliper relationship shall be provided in accordance with ANSI Z60.1. Height of branching shall bear a relationship to the size and species of tree specified and with the crown in good balance with the trunk. The trees shall not be "poled" or the leader removed.

- a. Single stem: The trunk shall be reasonably straight and symmetrical with crown and have a persistent main leader.
- b. Multi-stem: All countable stems, in aggregate, shall average the size specified. To be considered a stem, there shall be no division of the trunk which branches more than 6 inches from ground level.

Deciduous Shrubs

Deciduous shrubs shall have the height and number of primary stems recommended by ANSI Z60.1. Acceptable plant material shall be well shaped, with sufficient well-spaced side branches, and recognized by the trade as typical for the species grown in the region of the project.

Coniferous Evergreen Plant Material

Coniferous Evergreen plant material shall have the height-to-spread ratio recommended by ANSI Z60.1. The coniferous evergreen trees shall not be "poled" or the leader removed. Acceptable plant material shall be exceptionally heavy, well shaped and trimmed to form a symmetrical and tightly knit plant. The form of growth desired shall be as indicated.

Broadleaf Evergreen Plant Material

Broadleaf evergreen plant material shall have the height-to-spread ratio recommended by ANSI Z60.1. Acceptable plant material shall be well shaped and recognized by the trade as typical for the variety grown in the region of the project.

Ground Cover and Vine Plant Material

Ground cover and vine plant material shall have the minimum number of runners and length of runner recommended by ANSI Z60.1. Plant material shall have heavy, well developed and balanced crown with vigorous, well developed root system and shall be furnished in containers.

18.9 TOPSOIL

Off-Site Topsoil

Topsoil shall be as specified in Section 12.0 BACKFILL AND COMPACTION.

18.10 SOIL CONDITIONERS

Subcontractor shall provide singly or in combination as required to meet specified requirements for topsoil. Soil conditioners shall be nontoxic to plants.

Lime

Commercial grade natural limestone containing a calcium carbonate equivalent (C.C.E.) as specified in ASTM C 602 of not less than 85 percent. Limestone shall be ground so that not less than 90 percent passes a No. 10 mesh sieve and not less than 50 percent passes a No. 100 mesh sieve.

Aluminum Sulfate

Commercial grade.

Sulfur

100 percent elemental

Iron

100 percent elemental

Peat

Natural product of peat moss derived from a freshwater site and conforming to ASTM D 4427. Subcontractor shall shred and granulate peat to pass a 1/2 inch mesh screen and condition in storage pile for minimum 6 months after excavation.

Sand

Clean and free of materials harmful to plants.

Perlite

Horticultural grade.

Composted Derivatives

Ground bark, nitrolized sawdust, humus or other green wood waste material free of stones, sticks, and soil stabilized with nitrogen and having the following properties:

Particle Size

Minimum percent by weight passing:

No. 4 mesh screen	95
No. 8 mesh screen	80

Nitrogen Content

Minimum percent based on dry weight:

Fir Sawdust	0.7
Fir or Pine Bark	1.0

Biobased Content

Minimum 100 percent.

Gypsum

Coarsely ground gypsum comprised of calcium sulfate dihydrate 91 percent, calcium 22 percent, sulfur 17 percent; minimum 96 percent passing through 20 mesh screen, 100 percent passing thru 16 mesh screen.

18.11 PLANTING SOIL MIXTURES

Before mixing, Subcontractor shall clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth. The subcontractor shall mix specified soil amendments and fertilizers with topsoil at the rates required to produce the pH needed for that particular planting and as specified. Subcontractor shall delay mixing of fertilizer if planting shall not follow placing of planting soil within a few days. The Subcontractor shall provide planting soil mix proportions as follows:

<u>Percent by Volume</u>	<u>Material</u>
40 percent	Screened topsoil
25 percent	Peat Humus
25 percent	Compost
10 percent	Coarse Sand

18.12 FERTILIZER

Granular Fertilizer

Organic or synthetic, granular controlled release fertilizer containing the following minimum percentages, by weight, of plant food nutrients:

Not less than 10 percent	total nitrogen
Not less than 20 percent	available phosphoric acid
Not less than 20 percent	soluble potassium

Fertilizer Tablets

Organic or synthetic, plant tablets composed of tightly compressed fertilizer chips forming a tablet that is insoluble in water, is designed to provide a continuous release of nutrients for at least 24 months and contains the following minimum percentages, by weight, of plant food nutrients:

20 percent	available nitrogen
20 percent	available phosphorus
5 percent	available potassium

18.13 MULCH

Free from noxious weeds, mold, or other deleterious materials.

Organic Mulch Materials

Wood chips ground or shredded bark shredded hardwood bark peelings pine straw mulch or pine needles.

Recycled Organic Mulch

Recycled mulch may include compost, tree trimmings, or pine needles with a gradation that passes through a 2-1/2 by 2-1/2 inch screen. It shall be cleaned of all sticks a minimum 1 inch in diameter and plastic materials a minimum 3 inches length. The material shall be treated to retard the growth of mold and fungi.

18.14 STAKING AND GUYING MATERIAL

Staking Material

Tree Support Stakes

Rough sawn hard wood free of knots, rot, cross grain, bark, long slivers, or other defects that impair strength. Stakes shall be minimum 2 inches square or 2-1/2 inch diameter by 8 feet long, pointed at one end.

Ground Stakes

2 inches square are by 3 feet long, pointed at one end.

Guying Material

Guying Wire

12 gauge annealed galvanized steel, ASTM A 580/A 580M.

Guying Cable

Minimum five-strand, 3/16 inch diameter galvanized steel cable or plastic coated.

Hose Chafing Guards

New or used 2 ply 3/4 inch diameter reinforced rubber or plastic hose, black or dark green, all of the same color.

Flags

White surveyor's plastic tape, 8 inches long, fastened to guying wires or cables.

Turnbuckles

Galvanized or cadmium-plated steel with minimum 3 inch long openings fitted with screw eyes. Eye bolts shall be galvanized or cadmium-plated steel with 1 inch diameter eyes and screw length 1-1/2 inches, minimum.

Deadmen

4 by 8 inch rectangular or 8 inch diameter by 36 inch long, wood material.

Metal Anchors

Driven Anchors

Malleable iron, arrow shaped, galvanized, sized as follows:

<u>Tree Caliper</u>	<u>Anchor Size</u>
2 inches and under	3 inches
3 to 6 inches	4 inches
6 to 8 inches	6 inches
8 to 10 inches	8 inches
10 to 12 inches	10 inches

Screw Anchors

Steel, screw type with welded-on 3 inch round helical steel plate, minimum 3/8 inch diameter, 15 inches long.

18.15 ANTIDESICCANTS

Sprayable, water insoluble vinyl-vinledine complex which produce a moisture retarding barrier not removable by rain or snow. Film shall form at temperatures commonly encountered out of doors during planting season and have a moisture vapor transmission rate (MVT) of the resultant film of maximum 10 grams per 24 hours at 70 percent humidity.

18.16 EROSION CONTROL MATERIALS

Erosion control material shall conform to the following:

Erosion Control Blanket

100 percent agricultural straw or 70 percent agricultural straw/30 percent coconut fiber matrix stitched with a degradable nettings, designed to degrade within 12 months.

Erosion Control Fabric

Fabric shall be knitted construction of polypropylene yarn with uniform mesh openings 3/4 to 1 inch square with strips of biodegradable paper. Filler paper strips shall have a minimum life of 6 months.

Erosion Control Net

Net shall be heavy, twisted jute mesh, weighing approximately 1.22 pounds per linear yard and 4 feet wide with mesh openings of approximately 1 inch square.

Hydrophilic Colloids

Hydrophilic colloids shall be physiologically harmless to plant and animal life without phytotoxic agents. Colloids shall be naturally occurring, silicate powder based, and shall form a water insoluble membrane after curing. Colloids shall resist mold growth.

Erosion Control Material Anchors

Erosion control anchors shall be as recommended by the manufacturer.

18.17 WATER

Source of water to be approved by the Government and suitable quality for irrigation and shall not contain elements toxic to plant life.

18.18 MYCORRHIZAL FUNGI INOCULUM

Mycorrhizal fungi inoculum shall be composed of multiple-fungus inoculum as recommended by the manufacturer for the plant material specified.

18.19 SOURCE QUALITY CONTROL

The Government shall inspect plant materials at the project site and approve them. Subcontractor shall tag plant materials for size and quality.

18.20 EXTENT OF WORK

Subcontractor shall provide soil preparation, fertilizing, tree, shrub, vine, groundcover, planting, staking and guying, erosion control material installation and a mulch topdressing of all newly graded finished earth surfaces, unless indicated otherwise, at all areas inside or outside the limits of construction that are disturbed by the Contractor's operations, and as shown and specified.

18.21 PREPARATION

Protection

Protect existing and proposed landscape features, elements, and sites from damage or contamination. Protect trees, vegetation, and other designated features by erecting high-visibility, reusable construction fencing. Locate fence no closer to trees than the drip line. Plan equipment and vehicle access to minimize and confine soil disturbance and compaction to areas indicated on Drawings.

Layout

Subcontractor shall stake out approved plant material locations and planter bed outlines on the project site before digging plant pits or beds. The Government reserves the right to adjust plant material locations to meet field conditions. Subcontractor shall not plant closer than 24 inches to a building wall, pavement edge, fence or wall edge or other similar structures.

Preparation

Contractor shall protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations. Contractor shall provide erosion control measures to prevent erosion or displacement of soils and discharge of soil bearing water runoff or airborne dust to adjacent properties and walkways. Contractor shall lay out individual tree and shrub locations and areas for multiple exterior plantings. The Contractor shall stake locations, outline

areas, adjust locations when requested, and obtain Government's acceptance of layout before planting. Contractor shall make minor adjustments as required.

18.22 PLANT BED PREPARATION

Contractor shall verify location of underground utilities prior to excavation. Contractor shall protect existing adjacent turf before excavations are made. Where planting beds occur in existing turf areas, Contractor shall remove turf to a depth that shall ensure removal of entire root system. Contractor shall measure depth of plant pits from finished grade. Depth of plant pit excavation shall be as indicated and provide proper relation between top of root ball and finished grade. Subcontractor shall install plant material as specified in paragraph entitled "Plant Installation." Subcontractor shall not install trees within 10 feet of any utility lines or building walls.

18.23 PLANT INSTALLATION

Individual Plant Pit Excavation

Subcontractor shall excavate pits at least twice as large in diameter as the size of ball or container.

Plant Beds with Multiple Plants

Subcontractor shall excavate plant beds continuously throughout entire bed as outlined.

Handling and Setting

Subcontractor shall move plant materials only by supporting the root ball or container. The subcontractor shall set plants on hand compacted layer of prepared backfill soil mixture 6 inches thick or on native soil, as applicable, and hold plumb in the center of the pit until soil has been tamped firmly around root ball. Subcontractor shall set plant materials, in relation to surrounding finish grade, one to 2 inches above depth at which they were grown in the nursery, collecting field or container. The subcontractor shall replace plant material whose root balls are cracked or damaged either before or during the planting process.

Plant material shall be set in plant beds according to the drawings. Backfill soil mixture shall be placed on previously scarified subsoil to completely surround the root balls, and shall be brought to a smooth and even surface, blending to existing areas.

Balled and Burlapped Stock

Contractor shall backfill with prepared soil mixture to approximately half the depth of ball and then tamp and water. Contractor shall carefully remove or fold back excess burlap and tying materials from the top a minimum 1/3 depth from the top of the root ball. Contractor shall tamp and complete backfill, place mulch topdressing, and water. The Contractor shall remove wires and non-biodegradable materials from plant pit prior to backfill operations.

Bare-Root Stock

Contractor shall plant so roots are arranged in a natural position. The Contractor shall place roots in water a minimum of 30 minutes prior to planting. Contractor shall carefully work prepared soil mixture among roots. The Contractor shall tamp remainder of backfill, place mulch topdressing and water.

Container Grown Stock

Contractor shall remove grown stock from container and prevent damage to plant or root system.

Ground Covers and Vines

Contractor shall smooth planting areas before planting to provide even, smooth finish. The Contractor shall plant after placing weed control fabric and mulch topdressing. Contractor shall not remove plant material from flats or containers until immediately before planting. Contractor shall space at the intervals indicated. The Contractor shall plant at a depth to sufficiently cover all roots. Contractor shall start watering areas planted as required by temperature and wind conditions. The Contractor shall apply water at a rate sufficient to ensure thorough wetting of soil to a depth of 6 inches without run off. Contractor shall add mulch topdressing as needed.

Earth Mounded Watering Basin for Individual Plant Pits

Form with topsoil around each plant by replacing a mound of topsoil around the edge of each plant pit. Watering basins shall be 6 inches deep for trees and 4 inches deep for shrubs. Eliminate basins around plants in plant beds containing multiple plants.

Erosion Control Material

Contractor shall install in accordance with manufacturer's instructions.

Mulch Topdressing

Contractor shall provide mulch topdressing over entire planter bed surfaces and individual plant surfaces including earth mound watering basin around plants to a depth of 3 inches after completion of plant installation and before watering. Contractor shall keep mulch out of the crowns of shrubs. The Contractor shall place mulch a minimum 2 to 3 inches away from trunk of shrub or tree. Place on top of any weed control fabric.

Fertilization

Fertilizer Tablets

Contractor shall place fertilizer planting tablets evenly spaced around the plant pits to the manufacturer's recommended depth.

Granular Fertilizer

Contractor shall apply granular fertilizer as a topcoat prior to placing mulch layer and water thoroughly.

Watering

Contractor shall start watering areas planted as required by temperature and wind conditions. The Contractor shall apply water at a rate sufficient to ensure thorough wetting of soil to a depth of 12 inches without run off. Contractor shall water as needed for a period of three months or until plants are dormant, whichever occurs first.

Staking and Guying

Contractor shall guy and stake trees immediately after planting.

Upright Staking and Tying

Contractor shall stake trees of 2 inches through 5 inch caliper. The Contractor shall stake trees of less than 2 inch caliper only as required to prevent wind tip out. Use a minimum of two stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Contractor shall set vertical stakes and space to avoid penetrating root balls or root masses. The Contractor shall support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Contractor shall allow enough slack to avoid rigid restraint of tree. Use the number of stakes as follows:

- a. Use two stakes for trees up to 12 feet high and 2-1/2 inches or less in caliper.
- b. Use three stakes for trees greater than 12 feet, but less than 14 feet high, and up to 4 inches in caliper. Space stakes trees.

Guying and Staking

Contractor shall guy and stake trees exceeding 14 feet in height and more than 3 inches in caliper, unless otherwise indicated. The Contractor shall securely attach no fewer than three guys to stakes 30 inches long, driven to grade.

- a. For trees more than 6 inches in caliper, anchor guys to pressure preservative treated deadmen 8 inches in diameter and 48 inches long buried at least 36 inches below grade. Provide turnbuckles for each guy wire and tighten securely.
- b. Attach flags to each guy wire, 30 inches above finish grade.

Chafing Guards

Contractor shall use hose chafing guards, as specified where guy wire or cable shall contact the plant.

Deadmen

Contractor shall place deadmen a minimum 18 inches below ground surface. The Contractor shall place deadmen an equal distance from tree trunk and around the plant pit.

Wood Ground Stakes

Contractor shall drive wood ground stakes into firm ground outside of plant pit with top of stake flush with ground. Place equal distance from tree trunk and around the plant pit.

Iron Anchors

Contractor shall drive malleable iron anchors into firm ground outside of plant pit a minimum 30 inches below finish grade. Place equal distance from tree trunk and around the plant pit.

Steel Screw Anchors

Contractor shall insert steel screw anchors as recommended in manufacturer's data. Place equal distance from tree trunk and around the plant pit.

Pruning

Contractor shall prune in accordance with safety requirement of ANSI Z133.1.

Trees and Shrubs

Contractor shall remove dead and broken branches. Contractor shall prune to correct structural defects only. Contractor shall retain typical growth shape of individual plants with as much height and spread as practical. Contractor shall not cut central leader on trees. Contractor shall make cuts with sharp instruments. Contractor shall not flush cut with trunk or adjacent branches. Collars shall remain in place. Pruning shall be accomplished by trained and experienced personnel and shall be accordance with ANSI A 300.

Wound Dressing

Cuts more than 1-1/2 inches in diameter shall be painted with approved tree wound paint. Tree wound paint shall meet the requirements of Section 9.0 CLEARING AND GRUBBING.

18.24 RESTORATION AND CLEAN UP

Restoration

Turf areas, pavements and facilities that have been damaged from the planting operation shall be restored to original condition at the Contractor's expense.

Clean Up

Excess and waste material shall be removed from the installed area and shall be disposed offsite. Adjacent paved areas shall be cleared.

18.25 WARRANTY

Warrant the exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate care and maintenance, or abuse by Owner, or incidents that are beyond Contractor's control.

- (a) Warranty period for Trees and Shrubs: One year
- (b) Warranty period for Vines and Ground Cover: One year
- (c) Warranty period for Herbaceous and Woody Perennials: Three months
- (d) Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period
- (e) A limit of one replacement of each plant shall be required, except where losses or replacement failures are due to Contractor's failure to comply with specified requirements

SECTION 19.0 FENCE REPLACEMENT

Most of the properties within OU4 include some type of fencing that requires removal prior to soil excavation. As part of the site restoration, this fencing shall be replaced with new materials as per the contract documents. Fencing materials shall be delivered to each property as needed and any materials not installed immediately shall be stored and protected. Fencing shall be installed by a local subcontractor. A total of approximately 7,086 linear feet of fencing are estimated to be replaced at the initial 31 properties.

SECTION 20.0 DECONTAMINATION

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES, SECTION 01 78 00 PROJECT CLOSEOUT, and SECTION 02 61 13 EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL.

Decontamination of personnel and/or equipment shall be performed in accordance with requirements stated in 29 CFR 1910.120 and other applicable federal, state, and local requirements. The decontamination facilities shall be located near the work areas. The location shall be determined by the SSHO based on task, physical, weather, and other conditions.

Additional details for dry decontamination procedures are found below:

SUBSURFACE STRUCTURES DECONTAMINATION

Structures and utilities that are determined to be impacted by contaminated soil shall undergo decontamination and sampling as per SECTION 22.0 CHEMICAL DATA QUALITY CONTROL. Remove mud and other loose material adhering to the surface of utility lines, pipes, manholes, catch basins, foundations, or other surfaces utilizing a trowel, scraper, wire brush or other method approved by the Contracting Officer.

Following removal of contaminated material, the surface shall remain exposed until the entire surface area is dry. The Contractor may utilize drying techniques to accelerate the process, such as heaters or blowers, if approved by the Contracting Officer. The Contracting Officer shall inspect the wall or surface and approve the condition of drying prior to removal of remaining material.

When the surfaces are dry, and upon authorization from the Contracting Officer, any adhered material remaining shall be removed utilizing nylon power brush with vacuum shroud (to minimize generation of dust), or similar method if approved by the Contracting Officer. Methods which result in the significant generation of water shall not be acceptable. The surface shall be brushed and cleaned until all visible soil material is removed.

Following removal and disposal of all visible material adhering to the surface, the cleaned area shall be completely dried, and the surface shall be sampled as per SECTION 22.0 CHEMICAL DATA QUALITY CONTROL. A determination shall then be made by the Contracting Officer as to what additional decontamination activities may be required, if any. Continue to decontaminate surfaces as directed by the Contracting Officer.

For foundation walls, the Contractor may be directed to remove wall coatings, such as waterproofing material. Techniques using a wide blade chisel, scraper or other methods, approved by the Contracting Officer, may be used to complete this work.

Structures that are determined to be contaminated internally shall be demolished and disposed of off site as contaminated waste, as directed by the Contracting Officer.

SECTION 21.0 CONTRACTOR QUALITY CONTROL

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 45 16 CONTRACTOR QUALITY CONTROL.

SECTION 22.0 CHEMICAL DATA QUALITY CONTROL

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 35 45 CHEMICAL DATA QUALITY CONTROL and below information.

22.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that shall review the submittal for the Government. The following shall be submitted in addition to the submittals in OU1/OU2 Specification SECTION 01 35 45 CHEMICAL DATA QUALITY CONTROL:

SD-06 Test Reports

Chemical Data Packages; G

The Contractor shall obtain the services of a laboratory certified by NYSDEC and National Environmental Laboratory Accreditation Program (NELAP) for the required analyses. The chemical Level IV laboratory data packages, along with the EDDs, shall be submitted to the COR within 28 days of collection of the final sample in the SDG.

Daily Quality Control Reports (DQCRs); FIO

The Contractor shall submit DQCRs coincident with, or included in, the Daily chemical CQC reports in accordance with the requirements of Section 01 45 00 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM).

Quality Control Summary Reports (QCSRs); G

For each remedial area, the Contractor shall submit QCSRs to the COR for approval within 2 weeks following data validation and review. QCSRs shall be prepared in accordance with paragraph QUALITY CONTROL SUMMARY REPORT (QCSRs).

Electronic Data Deliverable (EDD); G

The electronic data deliverable (EDD) shall be submitted to the Contracting Officer for approval within days of completion of each property remedial action. The Contractor shall submit the EDDs in accordance with EPA Region 2 electronic data submission requirements. <https://www.epa.gov/superfund/region-2-superfund-electronic-data-submission>

22.2 DATA QUALITY OBJECTIVES (DQOS)

Excavation Goals

Remediation at this site shall be performed based on the excavation goals for lead as follows:

- a. Lead: 400 milligrams per kilogram (mg/kg)

For all residential properties where a remedial action is required, the average post excavation lead concentration within the top two feet of soil across the property must be less than or equal to 200 mg/kg.

All data quality objectives shall be outlined in the UFP-QAPP.

22.3 GENERAL REQUIREMENTS

22.3.1. PRE/POST-EXCAVATION/CONFIRMATION SAMPLE

Prior to conducting any remedial work at a property, the Contractor shall prepare a Post-Excavation/Confirmation Sample Plan for each excavation phase or as directed by the COR in accordance with NYSDEC's Technical Guidance (2010). This plan shall contain all necessary technical detail and direction for project personnel to conduct confirmation sampling. At a minimum the Post-Excavation/Confirmation Sample Plan shall contain the following items:

- a. A CAD drawing showing the remediation phase boundaries and layout.
- b. The remedial design excavation limit lines
- c. The number and initially assumed layout of each sample point. The Contractor shall ensure that a minimum of two soil samples (one from the bottom of the excavation and one from the sidewall) are collected from each property regardless of the excavation size and configuration.

Post-excavation confirmation samples shall, at a minimum, conform with the following: Select one sidewall sample location for every 30 linear feet of sidewall or other appropriate spacing based on the configuration of the excavation to demonstrate horizontal compliance with the remediation standards. Collect samples at the top and bottom of each sidewall to demonstrate vertical compliance with the remediation standards. Additional samples may be needed at other depths in a sidewall to demonstrate vertical compliance with the remediation standards. Bias sidewall sample locations and sample depths for each sidewall to the highest concentration based on field screening, depth of discharge, data from site investigation and RI sample locations, type and characteristics of contaminant, and other indicators of potential contamination. Adjust sample depths based on the depth at which contaminants were discharged (surface versus subsurface) and the type and characteristics of the contaminants that shall affect contaminant fate and migration.

Take one sample from the excavation bottom for every 900 square feet of bottom area. Bias bottom samples within each 900 square feet to the highest concentration based on field screening, data from site investigation and RI sample locations, type and characteristics of contaminant, and other indicators of potential contamination.

- d. A description of how the sample locations were established.
- e. The anticipated depth of the contamination based on the remedial design.

- f. Area-specific information that may affect the Post-Excavation/Confirmation Sample plan (historical site assessment information).

TABLE 3
SOIL/DEBRIS/DECONTAMINATION WATER SAMPLING FREQUENCY
REQUIREMENTS^(a)

COMPONENT	MATERIAL ORIGINS	FREQUENCY
Lead	Pre-Excavation Soil Confirmation Sampling – Sidewall	1 sample/30 linear feet and minimum of one sample per sidewall
Lead	Pre-Excavation Soil Confirmation Sampling – Base	1 sample/900 square feet and minimum of one sample per base

Notes:

(a) This table may not represent all testing requirements. Refer to specific sections for detailed testing requirements.

Pre-/Post-Excavation Confirmatory Sampling

The Contractor shall collect via direct push technology or similar methods and analyze soil samples at the limits of excavation as needed to comply with NYSDEC's Technical Guidance (2010) if the density of previously collected data for the properties during the RI does not comply with NYSDEC's confirmatory sampling requirements, and as indicated on contract drawings. Where data gaps exist in the existing analytical data and cut lines, the Contractor shall collect samples from each sidewall and from the bottom of each excavation and test using an off-site laboratory. Based on the results of this sampling, the limits of excavation shall be finalized and submitted for Government approval as an addendum to the Excavation, Restoration, and Material Handling Plan.

The contractor is not required to collect samples specifically to address requirements of the EPA Region 2 lead cleanup policy (200 ppm average across each property). Existing data and data collected as part of the pre-excavation confirmatory sampling shall be sufficient to meet these requirements.

The plan for pre-excavation confirmation samples as detailed in the UFP-QAPP must be approved by the Contracting Officer prior to mobilization to collect the samples.

All post-excavation samples shall be sent to an off-site laboratory for analysis for lead. A CAD drawing showing the sample locations shall be submitted to the COR within 28 days of collection of the final sample in the construction Remedial Unit.

Quality Control Summary Reports (QCSRs)

The Contractor shall provide QCSRs to the COR. At a minimum, the QCSR shall contain the following:

- a. Summary of project scope and description.
- b. Summary of any deviations from the UFP-QAPP or specifications including sampling methods, sampling locations, or analytical methods.

- c. Summary of chemical parameter measurements performed as contingent measurements.
- d. Summary discussion of resulting data including achieving data reporting requirements.
- e. Summary of DQO parameters including achieving project specific DQOs.
- f. Presentation and evaluation of the data to include an overall assessment on the quality of the data for each method and matrix.
- g. Internal QC data generated during the project, including tabular summaries correlating sample identifiers with all blank, matrix spikes, surrogates, duplicates, laboratory control samples, and batch identifiers.
- h. A list of the affected sample results for each analyte (indexed by method and matrix) including the appropriate data qualifier flag (J, U, R, etc.), where sample results are negatively impacted by adverse quality control criteria.
- i. Summary of field and laboratory oversight activities, providing a discussion of the reliability of the data, QC problems encountered, and a summary of the evaluation of data quality for each analysis and matrix as indicated by the laboratory QC data and any other relevant findings.
- j. Conclusions and recommendations.
- k. Appendices containing the final chemistry and sampling data packages in EPA Region 2 EDD format, usability reports when LSASD/CLP performs analysis, EPA's CLP or LSASD data validation reports, subcontract laboratory data packages, and validation reports for data from the subcontracted laboratory.

The following items shall not be required for the QCDR when CLP or LSASD laboratory provides the data sets:

- Summary of DQO parameters including achieving project specific DQO.
- Internal QC data generated during the project, including tabular summaries correlating sample identifiers with all blank, matrix spikes, surrogates, duplicates, laboratory control samples, and batch identifiers.
- Laboratory oversight activities.
- Summary of the evaluation of data quality for each analysis and matrix as indicated by the laboratory QC data.

SECTION 23.0 TEMPORARY ENVIRONMENTAL CONTROLS

Reference OU1/OU2 Specification SECTION 01 57 19 ENVIRONMENTAL PROTECTION and SECTION 01 57 13 EROSION AND SEDIMENTATION CONTROL.

SECTION 24.0 SUBMITTAL PROCEDURES

Reference Eighteen Mile Creek OU1/OU2 Specification SECTION 01 33 00 SUBMITTAL PROCEDURES.

SECTION 25.0 SAFETY, HEALTH, AND EMERGENCY RESPONSE

Refer to Eighteen Mile Creek OU 1 and OU 2 Specifications for SECTION 01 35 29 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES.

SECTION 26.0 LEAD BASED PAINT AWARENESS

26.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910

Occupational Safety and Health Standards

29 FR 1926

Safety and Health Regulations for Construction

26.2 DESCRIPTION

There is no specific task for lead-based paint abatement; however, it should be assumed that any discovered underground storage tanks or residential structures are coated in lead-based paint and painted materials are lead based, and Contractors should make employees aware of the potential worker exposure issues during remediation procedures.

26.3 SUMMARY OF WORK

Potential Lead Hazard

The disturbance or dislocation of lead-containing materials may cause lead dust to be released into the atmosphere, thereby creating a potential health hazard to workmen and others who may be on-site. Contractor shall apprise all workers, supervisory personnel, Subcontractor's and consultants who shall be at the job site of the seriousness of the hazard and of proper work procedures which must be followed. Take appropriate measures as necessary to protect all site workers from the potential hazard to airborne lead dust. Such measures shall include the procedures and methods described herein, regulations of the Occupational Safety and Health Administration (OSHA), such as 29 CFR 1910.1025, and the EPA.

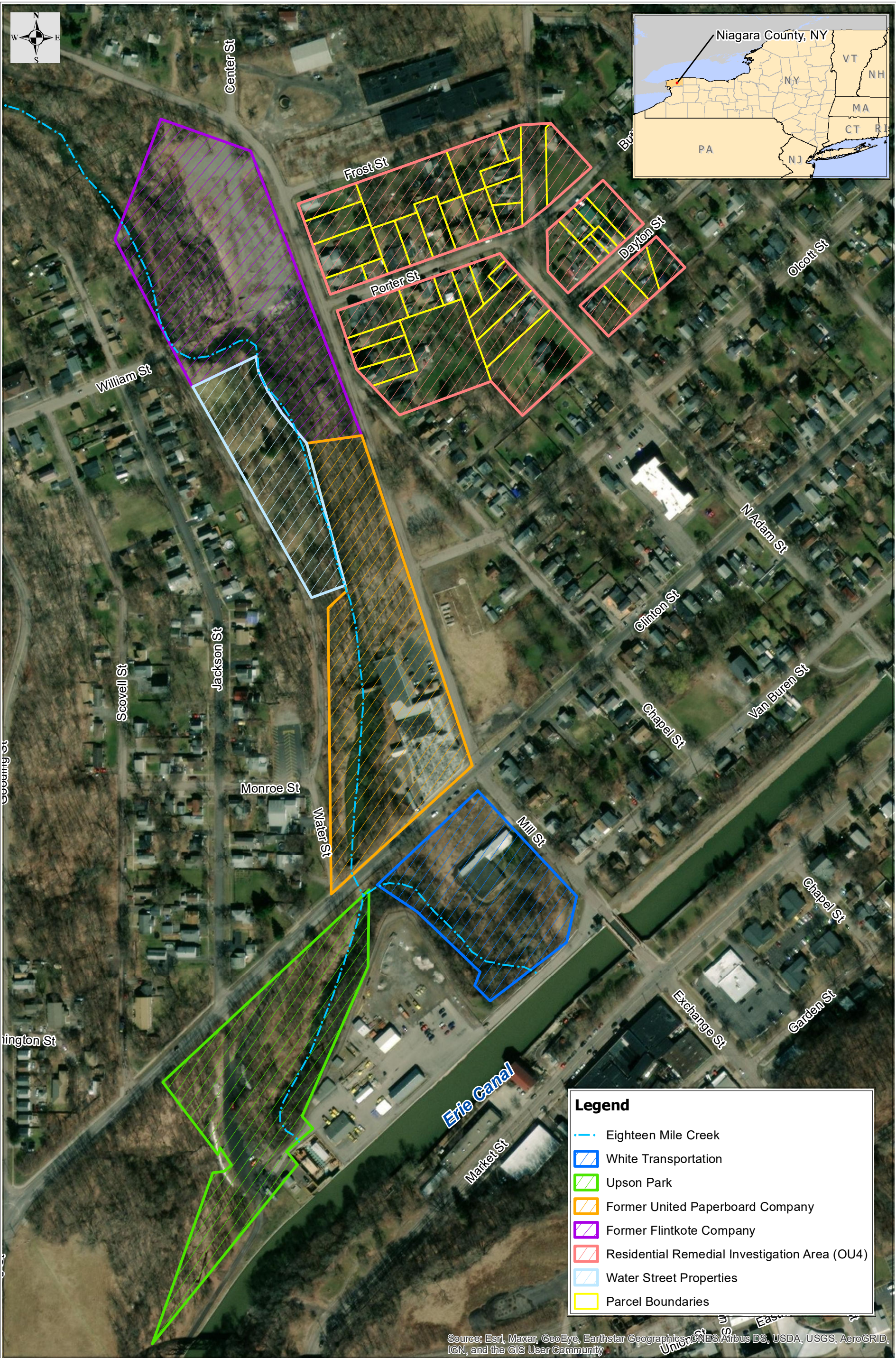
Lead Compliance Plan

The Contractor is required to submit a Lead Compliance Plan in accordance with 29 CFR 1910 and 29 CFR 1926.

SECTION 27.0 REFERENCES

- United States Environmental Protection Agency (EPA). 2003. Superfund Lead-Contaminated Residential Sites Handbook, Office of Superfund Remediation and Technology Innovation, Washington, D.C., OSWER Directive 9285.7-50A, 124 p.
- United States Environmental Protection Agency (EPA). 2018a. Remedial Investigation Report, Eighteen Mile Creek Superfund Site, Operable Unit 4, Niagara County, New York.
- United States Environmental Protection Agency (EPA). 2018b. Record of Decision, Eighteen Mile Creek Superfund Site, Operable Unit 4, Niagara County, New York.
- United States Environmental Protection Agency (EPA). 2018c. Remedial Investigation Report Addendum, Eighteen Mile Creek Superfund Site, Operable Unit 4, Niagara County, New York.

FIGURE 1
Eighteen Mile Creek Superfund Site
Lockport, NY



Base map created using ESRI World Imagery Data (2019).

Map Creation Date: 14 December 2020

Coordinate system: New York State Plane West
FIPS: 3103
Datum: NAD83
Unit: Feet

MXD file: G:\ArcInfoProjects\SERAS01\SER00358_18Mile_Creek\Final_Report2020
358_DFR2020_18Mile_Creek_Corridor_Overview_f1.mxd

0 250 500 Feet

U.S. EPA Environmental Response Team
Scientific Engineering Response and Analytical Services
EP-W-09-031
W.A.# SERAS-358

Figure 1
Eighteen Mile Creek Corridor Overview
Eighteen Mile Creek Superfund Site
Lockport, New York

APPENDIX A

Lead Concentrations in Soil from EPA Remedial Investigation at OU4
Eighteen Mile Creek Superfund Site
Lockport, NY

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-1765	P002	S0227	Q1	18	24	18 to 24	D	Lead	59		Final	2019 April ERT Soil Sampling Week 1	43.1822938	-78.688983	4/23/2019	9:20
ERT-1766	P002	S0227	Q1	24	30	24 to 30	E	Lead	61		Final	2019 April ERT Soil Sampling Week 1	43.1822938	-78.688983	4/23/2019	9:20
ERT-1781	P002	S0228	Q1	18	24	18 to 24	D	Lead	48		Final	2019 April ERT Soil Sampling Week 1	43.1821768	-78.688975	4/23/2019	9:47
ERT-1782	P002	S0228	Q1	24	30	24 to 30	E	Lead	38		Final	2019 April ERT Soil Sampling Week 1	43.1821768	-78.688975	4/23/2019	9:47
ERT-1789	P002	S0229	Q1	18	24	18 to 24	D	Lead	39		Final	2019 April ERT Soil Sampling Week 1	43.1821988	-78.688882	4/23/2019	9:54
ERT-1790	P002	S0229	Q1	24	30	24 to 30	E	Lead	44		Final	2019 April ERT Soil Sampling Week 1	43.1821988	-78.688882	4/23/2019	9:54
ERT-1757	P002	S0230	Q1	18	24	18 to 24	D	Lead	83		Final	2019 April ERT Soil Sampling Week 1	43.1823349	-78.688832	4/23/2019	9:10
ERT-1758	P002	S0230	Q1	24	30	24 to 30	E	Lead	49		Final	2019 April ERT Soil Sampling Week 1	43.1823349	-78.688832	4/23/2019	9:10
ERT-1797	P002	S0231	Q1	18	24	18 to 24	D	Lead	18		Final	2019 April ERT Soil Sampling Week 1	43.1822215	-78.688773	4/23/2019	10:05
ERT-1798	P002	S0231	Q1	24	30	24 to 30	E	Lead	7.7		Final	2019 April ERT Soil Sampling Week 1	43.1822215	-78.688773	4/23/2019	10:05
ERT-1773	P002	S0233	Q1	18	24	18 to 24	D	Lead	73		Final	2019 April ERT Soil Sampling Week 1	43.1822448	-78.689039	4/23/2019	9:40
ERT-1774	P002	S0233	Q1	24	30	24 to 30	E	Lead	46		Final	2019 April ERT Soil Sampling Week 1	43.1822448	-78.689039	4/23/2019	9:40
RI Data	P002	n/a	Q1	2	6	2 to 6	A	Lead	414		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	2	6	2 to 6	A	Lead	204		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	0	2	0 to 2	AA	Lead	393		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	0	2	0 to 2	AA	Lead	205		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	0	2	0 to 2	AA	Lead	243		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	0	2	0 to 2	AA	Lead	276		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	12	18	12 to 18	C	Lead	216		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	18	24	18 to 24	D	Lead	66.2		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	18	24	18 to 24	D	Lead	73		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q1	18	24	18 to 24	D	Lead	46.4		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-1709	P002	SW213	Q2	18	24	18 to 24	D	Lead	52		Final	2019 April ERT Soil Sampling Week 1	43.1823974	-78.688473	4/23/2019	8:00
ERT-1717	P002	SW214	Q2	18	24	18 to 24	D	Lead	130		Final	2019 April ERT Soil Sampling Week 1	43.1823246	-78.688437	4/23/2019	8:10
ERT-1738	P002	SW219	Q2	0	6	0 to 6	A	Lead	150		Final	2019 April ERT Soil Sampling Week 1	43.1822744	-78.688719	4/23/2019	8:45
ERT-1746	P002	SW220	Q2	0	6	0 to 6	A	Lead	320		Final	2019 April ERT Soil Sampling Week 1	43.182344	-78.688759	4/23/2019	9:00
ERT-1730	P002	SW221	Q2	0	6	0 to 6	A	Lead	480		Final	2019 April ERT Soil Sampling Week 1	43.1822242	-78.688612	4/23/2019	8:35
ERT-1722	P002	SW222	Q2	0	6	0 to 6	A	Lead	410		Final	2019 April ERT Soil Sampling Week 1	43.1822229	-78.688509	4/23/2019	8:20
ERT-3173	P002	SW390	Q2	0	6	0 to 6	A	Lead	350		Final	2019 June Delineation Sampling	43.1822587	-78.688625	6/13/2019	10:25
ERT-3174	P002	SW390	Q2	6	12	6 to 12	B	Lead	72		Final	2019 June Delineation Sampling	43.1822587	-78.688625	6/13/2019	10:25
ERT-3178	P002	SW391	Q2	0	6	0 to 6	A	Lead	690		Final	2019 June Delineation Sampling	43.1822621	-78.688543	6/13/2019	10:43
ERT-3179	P002	SW391	Q2	6	12	6 to 12	B	Lead	370		Final	2019 June Delineation Sampling	43.1822621	-78.688543	6/13/2019	10:43
RI Data	P002	n/a	Q2	2	6	2 to 6	A	Lead	268		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	0	2	0 to 2	AA	Lead	198		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	0	2	0 to 2	AA	Lead	226		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	0	2	0 to 2	AA	Lead	243		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	0	2	0 to 2	AA	Lead	271		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	6	12	6 to 12	B	Lead	211		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	12	18	12 to 18	C	Lead	222		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	18	24	18 to 24	D	Lead	127		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	18	24	18 to 24	D	Lead	76.2		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P002	n/a	Q2	18	24	18 to 24	D	Lead	83.2		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-1917	P003	S0238	Q1	18	24	18 to 24	D	Lead	72		Final	2019 April ERT Soil Sampling Week 1	43.1820812	-78.68836	4/23/2019	13:40
ERT-1918	P003	S0238	Q1	24	30	24 to 30	E	Lead	17		Final	2019 April ERT Soil Sampling Week 1	43.1820812	-78.68836	4/23/2019	13:40
ERT-1933	P003	S0239	Q1	18	24	18 to 24	D	Lead	5.9		Final	2019 April ERT Soil Sampling Week 1	43.1819944	-78.688319	4/23/2019	14:00
ERT-1934	P003	S0239	Q1	24	30	24 to 30	E	Lead	16		Final	2019 April ERT Soil Sampling Week 1	43.1819944	-78.688319	4/23/2019	14:00
ERT-1949	P003	S0240	Q1	18	24	18 to 24	D	Lead	48		Final	2019 April ERT Soil Sampling Week 1	43.1819029	-78.688314	4/23/2019	14:15
ERT-1950	P003	S0240	Q1	24	30	24 to 30	E	Lead	65		Final	2019 April ERT Soil Sampling Week 1	43.1819029	-78.688314	4/23/2019	14:15
ERT-1965	P003	S0241	Q1	18	24	18 to 24	D	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1818404	-78.688254	4/23/2019	14:50
ERT-1966	P003	S0241	Q1	24	30	24 to 30	E	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1818404	-78.688254	4/23/2019	14:50
ERT-1973	P003	S0242	Q1	18	24	18 to 24	D	Lead	35		Final	2019 April ERT Soil Sampling Week 1	43.1818158	-78.688354	4/23/2019	15:00
ERT-1974	P003	S0242	Q1	24	30	24 to 30	E	Lead	9.6		Final	2019 April ERT Soil Sampling Week 1	43.1818158	-78.688354	4/23/2019	15:00
ERT-1981	P003	S0243	Q1	18	24	18 to 24	D	Lead	17		Final	2019 April ERT Soil Sampling Week 1	43.181881	-78.688401	4/23/2019	15:10
ERT-2027	P003	S0243	Q1	18	24	18 to 24	D	Lead	27		Final	2019 April ERT Soil Sampling Week 1	43.181881	-78.688401	4/23/2019	15:10
ERT-1982	P003	S0243	Q1	24	30	24 to 30	E	Lead	30		Final	2019 April ERT Soil Sampling Week 1	43.181881	-78.688401	4/23/2019	15:10

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2028	P003	S0243	Q1	24	30	24 to 30	E	Lead	14		Final	2019 April ERT Soil Sampling Week 1	43.181881	-78.688401	4/23/2019	15:10
ERT-2005	P003	S0244	Q1	18	24	18 to 24	D	Lead	160		Final	2019 April ERT Soil Sampling Week 1	43.181898	-78.688488	4/23/2019	15:40
ERT-2006	P003	S0244	Q1	24	30	24 to 30	E	Lead	6.3		Final	2019 April ERT Soil Sampling Week 1	43.181898	-78.688488	4/23/2019	15:40
ERT-1997	P003	S0245	Q1	18	24	18 to 24	D	Lead	88		Final	2019 April ERT Soil Sampling Week 1	43.181814	-78.688526	4/23/2019	15:25
ERT-1998	P003	S0245	Q1	24	30	24 to 30	E	Lead	38		Final	2019 April ERT Soil Sampling Week 1	43.181814	-78.688526	4/23/2019	15:25
ERT-2013	P003	S0246	Q1	18	24	18 to 24	D	Lead	56		Final	2019 April ERT Soil Sampling Week 1	43.181951	-78.688535	4/23/2019	15:45
ERT-2014	P003	S0246	Q1	24	30	24 to 30	E	Lead	19		Final	2019 April ERT Soil Sampling Week 1	43.181951	-78.688535	4/23/2019	15:45
ERT-1989	P003	S0247	Q1	18	24	18 to 24	D	Lead	88		Final	2019 April ERT Soil Sampling Week 1	43.181963	-78.688446	4/23/2019	15:20
ERT-1990	P003	S0247	Q1	24	30	24 to 30	E	Lead	7.3		Final	2019 April ERT Soil Sampling Week 1	43.181963	-78.688446	4/23/2019	15:20
ERT-1909	P003	S0248	Q1	18	24	18 to 24	D	Lead	39		Final	2019 April ERT Soil Sampling Week 1	43.182045	-78.688478	4/23/2019	13:30
ERT-1910	P003	S0248	Q1	24	30	24 to 30	E	Lead	12		Final	2019 April ERT Soil Sampling Week 1	43.182045	-78.688478	4/23/2019	13:30
ERT-1901	P003	S0249	Q1	18	24	18 to 24	D	Lead	45		Final	2019 April ERT Soil Sampling Week 1	43.182015	-78.688578	4/23/2019	13:20
ERT-1902	P003	S0249	Q1	24	30	24 to 30	E	Lead	24		Final	2019 April ERT Soil Sampling Week 1	43.182015	-78.688578	4/23/2019	13:20
ERT-1893	P003	S0250	Q1	18	24	18 to 24	D	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.181991	-78.688681	4/23/2019	13:10
ERT-1894	P003	S0250	Q1	24	30	24 to 30	E	Lead	31		Final	2019 April ERT Soil Sampling Week 1	43.181991	-78.688681	4/23/2019	13:10
ERT-1885	P003	S0251	Q1	18	24	18 to 24	D	Lead	180		Final	2019 April ERT Soil Sampling Week 1	43.181967	-78.688787	4/23/2019	13:00
ERT-1886	P003	S0251	Q1	24	30	24 to 30	E	Lead	72		Final	2019 April ERT Soil Sampling Week 1	43.181967	-78.688787	4/23/2019	13:00
ERT-1877	P003	S0252	Q1	18	24	18 to 24	D	Lead	180		Final	2019 April ERT Soil Sampling Week 1	43.181943	-78.688889	4/23/2019	11:50
ERT-1878	P003	S0252	Q1	24	30	24 to 30	E	Lead	41		Final	2019 April ERT Soil Sampling Week 1	43.181943	-78.688889	4/23/2019	11:50
ERT-2021	P003	S0253	Q1	18	24	18 to 24	D	Lead	130		Final	2019 April ERT Soil Sampling Week 1	43.181945	-78.688652	4/23/2019	15:50
ERT-2026	P003	S0253	Q1	18	24	18 to 24	D	Lead	170		Final	2019 April ERT Soil Sampling Week 1	43.181945	-78.688652	4/23/2019	15:50
ERT-2022	P003	S0253	Q1	24	30	24 to 30	E	Lead	63		Final	2019 April ERT Soil Sampling Week 1	43.181945	-78.688652	4/23/2019	15:50
ERT-2032	P003	S0254	Q1	18	24	18 to 24	D	Lead	500		Final	2019 April ERT Soil Sampling Week 1	43.181910	-78.688772	4/24/2019	7:29
ERT-2033	P003	S0254	Q1	24	30	24 to 30	E	Lead	250		Final	2019 April ERT Soil Sampling Week 1	43.181910	-78.688772	4/24/2019	7:29
ERT-2034	P003	S0254	Q1	30	36	30 to 36	F	Lead	190		Final	2019 April ERT Soil Sampling Week 1	43.181910	-78.688772	4/24/2019	7:29
ERT-2035	P003	S0254	Q1	36	42	36 to 42	G	Lead	57		Final	2019 April ERT Soil Sampling Week 1	43.181910	-78.688772	4/24/2019	7:29
ERT-2041	P003	S0255	Q1	18	24	18 to 24	D	Lead	32		Final	2019 April ERT Soil Sampling Week 1	43.181859	-78.688851	4/24/2019	7:40
ERT-2042	P003	S0255	Q1	24	30	24 to 30	E	Lead	27		Final	2019 April ERT Soil Sampling Week 1	43.181859	-78.688851	4/24/2019	7:40
ERT-2049	P003	S0256	Q1	18	24	18 to 24	D	Lead	35		Final	2019 April ERT Soil Sampling Week 1	43.181747	-78.688757	4/24/2019	7:45
ERT-2050	P003	S0256	Q1	24	30	24 to 30	E	Lead	43		Final	2019 April ERT Soil Sampling Week 1	43.181747	-78.688757	4/24/2019	7:45
ERT-1922	P003	SW223	Q1	0	6	0 to 6	A	Lead	630		Final	2019 April ERT Soil Sampling Week 1	43.182036	-78.688302	4/23/2019	13:50
ERT-1938	P003	SW224	Q1	0	6	0 to 6	A	Lead	430		Final	2019 April ERT Soil Sampling Week 1	43.181965	-78.688254	4/23/2019	14:10
ERT-1954	P003	SW225	Q1	0	6	0 to 6	A	Lead	110		Final	2019 April ERT Soil Sampling Week 1	43.181891	-78.688227	4/23/2019	14:35
ERT-2054	P003	SW257	Q1	0	6	0 to 6	A	Lead	380		Final	2019 April ERT Soil Sampling Week 1	43.181715	-78.688739	4/24/2019	7:55
RI Data	P003	n/a	Q1	2	6	2 to 6	A	Lead	717		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	2	6	2 to 6	A	Lead	302		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	2	6	2 to 6	A	Lead	370		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	2	6	2 to 6	A	Lead	628		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	2	6	2 to 6	A	Lead	1030		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	647		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	385		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	287		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	375		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	540		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	894		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	0	2	0 to 2	AA	Lead	937		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	12	18	12 to 18	C	Lead	232		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	18	24	18 to 24	D	Lead	262		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	18	24	18 to 24	D	Lead	239		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	18	24	18 to 24	D	Lead	247		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	18	24	18 to 24	D	Lead	126		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	18	24	18 to 24	D	Lead	211		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P003	n/a	Q1	18	24	18 to 24	D	Lead	241		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2291	P004	SW270	Q1	0	6	0 to 6	A	Lead	1000		Final	2019 April ERT Soil Sampling Week 1	43.1812564	-78.688507	4/24/2019	13:35
ERT-2299	P004	SW271	Q1	0	6	0 to 6	A	Lead	570		Final	2019 April ERT Soil Sampling Week 1	43.1812998	-78.688395	4/24/2019	13:41

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2307	P004	SW272	Q1	0	6	0 to 6	A	Lead	450		Final	2019 April ERT Soil Sampling Week 1	43.1813206	-78.68829	4/24/2019	13:46
ERT-2315	P004	SW273	Q1	0	6	0 to 6	A	Lead	1300		Final	2019 April ERT Soil Sampling Week 1	43.1813495	-78.688144	4/24/2019	13:52
ERT-3182	P004	SW392	Q1	0	6	0 to 6	A	Lead	150		Final	2019 June Delineation Sampling	43.181295	-78.688518	6/13/2019	11:07
ERT-3183	P004	SW392	Q1	6	12	6 to 12	B	Lead	38		Final	2019 June Delineation Sampling	43.181295	-78.688518	6/13/2019	11:07
ERT-3186	P004	SW393	Q1	0	6	0 to 6	A	Lead	440		Final	2019 June Delineation Sampling	43.181323	-78.68842	6/13/2019	11:11
ERT-3187	P004	SW393	Q1	6	12	6 to 12	B	Lead	220		Final	2019 June Delineation Sampling	43.181323	-78.68842	6/13/2019	11:11
ERT-3190	P004	SW394	Q1	0	6	0 to 6	A	Lead	500		Final	2019 June Delineation Sampling	43.1813407	-78.688307	6/13/2019	11:20
ERT-3191	P004	SW394	Q1	6	12	6 to 12	B	Lead	200		Final	2019 June Delineation Sampling	43.1813407	-78.688307	6/13/2019	11:20
RI Data	P004	n/a	Q1	2	6	2 to 6	A	Lead	256		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	2	6	2 to 6	A	Lead	303		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	0	2	0 to 2	AA	Lead	239		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	0	2	0 to 2	AA	Lead	279		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	0	2	0 to 2	AA	Lead	120		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	12	18	12 to 18	C	Lead	101		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	18	24	18 to 24	D	Lead	46.5		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	18	24	18 to 24	D	Lead	111		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q1	18	24	18 to 24	D	Lead	52.3		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	2	6	2 to 6	A	Lead	991		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	2	6	2 to 6	A	Lead	543		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	0	2	0 to 2	AA	Lead	1040		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	0	2	0 to 2	AA	Lead	525		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	0	2	0 to 2	AA	Lead	179		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	6	12	6 to 12	B	Lead	172		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	18	24	18 to 24	D	Lead	278		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	18	24	18 to 24	D	Lead	29.3		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P004	n/a	Q2	18	24	18 to 24	D	Lead	29		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2073	P004	S0259	Q2	18	24	18 to 24	D	Lead	9.4		Final	2019 April ERT Soil Sampling Week 1	43.1816015	-78.68806	4/24/2019	8:15
ERT-2074	P004	S0259	Q2	24	30	24 to 30	E	Lead	2.1		Final	2019 April ERT Soil Sampling Week 1	43.1816015	-78.68806	4/24/2019	8:15
ERT-2081	P004	S0260	Q2	18	24	18 to 24	D	Lead	2.9		Final	2019 April ERT Soil Sampling Week 1	43.1815381	-78.688034	4/24/2019	8:25
ERT-2126	P004	S0260	Q2	18	24	18 to 24	D	Lead	1.9		Final	2019 April ERT Soil Sampling Week 1	43.1815381	-78.688034	4/24/2019	8:25
ERT-2082	P004	S0260	Q2	24	30	24 to 30	E	Lead	2.1		Final	2019 April ERT Soil Sampling Week 1	43.1815381	-78.688034	4/24/2019	8:25
ERT-2127	P004	S0260	Q2	24	30	24 to 30	E	Lead	1.9		Final	2019 April ERT Soil Sampling Week 1	43.1815381	-78.688034	4/24/2019	8:25
ERT-2089	P004	S0261	Q2	18	24	18 to 24	D	Lead	48		Final	2019 April ERT Soil Sampling Week 1	43.1814559	-78.688006	4/24/2019	8:30
ERT-2090	P004	S0261	Q2	24	30	24 to 30	E	Lead	2.5		Final	2019 April ERT Soil Sampling Week 1	43.1814559	-78.688006	4/24/2019	8:30
ERT-2097	P004	S0262	Q2	18	24	18 to 24	D	Lead	100		Final	2019 April ERT Soil Sampling Week 1	43.1813893	-78.688002	4/24/2019	8:40
ERT-2098	P004	S0262	Q2	24	30	24 to 30	E	Lead	69		Final	2019 April ERT Soil Sampling Week 1	43.1813893	-78.688002	4/24/2019	8:40
ERT-2133	P004	S0263	Q2	18	24	18 to 24	D	Lead	29		Final	2019 April ERT Soil Sampling Week 1	43.1815789	-78.688174	4/24/2019	9:20
ERT-2134	P004	S0263	Q2	24	30	24 to 30	E	Lead	4		Final	2019 April ERT Soil Sampling Week 1	43.1815789	-78.688174	4/24/2019	9:20
ERT-2121	P004	S0264	Q2	18	24	18 to 24	D	Lead	35		Final	2019 April ERT Soil Sampling Week 1	43.1815026	-78.688131	4/24/2019	9:00
ERT-2122	P004	S0264	Q2	24	30	24 to 30	E	Lead	54		Final	2019 April ERT Soil Sampling Week 1	43.1815026	-78.688131	4/24/2019	9:00
ERT-2113	P004	S0265	Q2	18	24	18 to 24	D	Lead	160		Final	2019 April ERT Soil Sampling Week 1	43.1814408	-78.68811	4/24/2019	8:55
ERT-2128	P004	S0265	Q2	18	24	18 to 24	D	Lead	160		Final	2019 April ERT Soil Sampling Week 1	43.1814408	-78.68811	4/24/2019	8:55
ERT-2114	P004	S0265	Q2	24	30	24 to 30	E	Lead	75		Final	2019 April ERT Soil Sampling Week 1	43.1814408	-78.68811	4/24/2019	8:55
ERT-2129	P004	S0265	Q2	24	30	24 to 30	E	Lead	56		Final	2019 April ERT Soil Sampling Week 1	43.1814408	-78.68811	4/24/2019	8:55
ERT-2105	P004	S0266	Q2	18	24	18 to 24	D	Lead	210		Final	2019 April ERT Soil Sampling Week 1	43.1813698	-78.688079	4/24/2019	8:50
ERT-2106	P004	S0266	Q2	24	30	24 to 30	E	Lead	100		Final	2019 April ERT Soil Sampling Week 1	43.1813698	-78.688079	4/24/2019	8:50
ERT-2323	P004	SW267	Q2	0	6	0 to 6	A	Lead	920	J	Final	2019 April ERT Soil Sampling Week 1	43.1814071	-78.688156	4/24/2019	14:00
ERT-2331	P004	SW268	Q2	0	6	0 to 6	A	Lead	200		Final	2019 April ERT Soil Sampling Week 1	43.1814965	-78.688191	4/24/2019	14:05
ERT-2339	P004	SW269	Q2	0	6	0 to 6	A	Lead	160		Final	2019 April ERT Soil Sampling Week 1	43.181554	-78.688229	4/24/2019	14:12
ERT-2238	P005	S0288	Q1	18	24	18 to 24	D	Lead	48		Final	2019 April ERT Soil Sampling Week 1	43.1810472	-78.68829	4/24/2019	11:10
ERT-2239	P005	S0288	Q1	24	30	24 to 30	E	Lead	110		Final	2019 April ERT Soil Sampling Week 1	43.1810472	-78.68829	4/24/2019	11:10
ERT-2246	P005	S0289	Q1	18	24	18 to 24	D	Lead	9.8		Final	2019 April ERT Soil Sampling Week 1	43.1809712	-78.688393	4/24/2019	11:17
ERT-2247	P005	S0289	Q1	24	30	24 to 30	E	Lead	43		Final	2019 April ERT Soil Sampling Week 1	43.1809712	-78.688393	4/24/2019	11:17
ERT-2190	P005	S0290	Q1	18	24	18 to 24	D	Lead	110		Final	2019 April ERT Soil Sampling Week 1	43.1810673	-78.68847	4/24/2019	10:05
ERT-2191	P005	S0290	Q1	24	30	24 to 30	E	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1810673	-78.68847	4/24/2019	10:05

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2235	P005	SW288	Q1	0	6	0 to 6	A	Lead	220		Final	2019 April ERT Soil Sampling Week 1	43.1810472	-78.68829	4/24/2019	11:10
ERT-2243	P005	SW289	Q1	0	6	0 to 6	A	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1809712	-78.688393	4/24/2019	11:17
RI Data	P005	n/a	Q1	2	6	2 to 6	A	Lead	316	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q1	0	2	0 to 2	AA	Lead	464	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q1	0	2	0 to 2	AA	Lead	328	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q1	6	12	6 to 12	B	Lead	444	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q1	18	24	18 to 24	D	Lead	125	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q1	18	24	18 to 24	D	Lead	69.1	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2222	P005	S0275	Q2	18	24	18 to 24	D	Lead	230		Final	2019 April ERT Soil Sampling Week 1	43.1812116	-78.687996	4/24/2019	10:33
ERT-2223	P005	S0275	Q2	24	30	24 to 30	E	Lead	89		Final	2019 April ERT Soil Sampling Week 1	43.1812116	-78.687996	4/24/2019	10:33
ERT-2206	P005	S0276	Q2	18	24	18 to 24	D	Lead	16		Final	2019 April ERT Soil Sampling Week 1	43.1811387	-78.687966	4/24/2019	10:50
ERT-2207	P005	S0276	Q2	24	30	24 to 30	E	Lead	23		Final	2019 April ERT Soil Sampling Week 1	43.1811387	-78.687966	4/24/2019	10:50
ERT-2198	P005	S0281	Q2	18	24	18 to 24	D	Lead	6.2		Final	2019 April ERT Soil Sampling Week 1	43.1811599	-78.688215	4/24/2019	10:15
ERT-2199	P005	S0281	Q2	24	30	24 to 30	E	Lead	4.7		Final	2019 April ERT Soil Sampling Week 1	43.1811599	-78.688215	4/24/2019	10:15
ERT-2214	P005	S0282	Q2	18	24	18 to 24	D	Lead	16		Final	2019 April ERT Soil Sampling Week 1	43.1812079	-78.688109	4/24/2019	10:25
ERT-2215	P005	S0282	Q2	24	30	24 to 30	E	Lead	4.3		Final	2019 April ERT Soil Sampling Week 1	43.1812079	-78.688109	4/24/2019	10:25
ERT-2182	P005	S0283	Q2	18	24	18 to 24	D	Lead	2.8		Final	2019 April ERT Soil Sampling Week 1	43.1810948	-78.688096	4/24/2019	10:58
ERT-2183	P005	S0283	Q2	24	30	24 to 30	E	Lead	5		Final	2019 April ERT Soil Sampling Week 1	43.1810948	-78.688096	4/24/2019	10:58
ERT-2230	P005	S0287	Q2	18	24	18 to 24	D	Lead	170		Final	2019 April ERT Soil Sampling Week 1	43.181073	-78.68818	4/24/2019	11:00
ERT-2231	P005	S0287	Q2	24	30	24 to 30	E	Lead	96		Final	2019 April ERT Soil Sampling Week 1	43.181073	-78.68818	4/24/2019	11:00
ERT-2227	P005	SW287	Q2	0	6	0 to 6	A	Lead	420		Final	2019 April ERT Soil Sampling Week 1	43.181073	-78.68818	4/24/2019	11:00
RI Data	P005	n/a	Q2	2	6	2 to 6	A	Lead	910	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	2	6	2 to 6	A	Lead	337	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	2	6	2 to 6	A	Lead	132	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	0	2	0 to 2	AA	Lead	813	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	0	2	0 to 2	AA	Lead	361	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	0	2	0 to 2	AA	Lead	503	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	0	2	0 to 2	AA	Lead	127	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	6	12	6 to 12	B	Lead	435	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	18	24	18 to 24	D	Lead	77.9	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	18	24	18 to 24	D	Lead	72	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	18	24	18 to 24	D	Lead	80.6	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P005	n/a	Q2	18	24	18 to 24	D	Lead	15.7	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-1866	P021	SW215	Q1	0	6	0 to 6	A	Lead	550		Final	2019 April ERT Soil Sampling Week 1	43.1821632	-78.688638	4/23/2019	11:15
ERT-1842	P021	SW216	Q1	0	6	0 to 6	A	Lead	200		Final	2019 April ERT Soil Sampling Week 1	43.1820233	-78.688698	4/23/2019	11:25
ERT-1850	P021	SW217	Q1	0	6	0 to 6	A	Lead	210		Final	2019 April ERT Soil Sampling Week 1	43.1819767	-78.688821	4/23/2019	11:30
ERT-1858	P021	SW218	Q1	0	6	0 to 6	A	Lead	350		Final	2019 April ERT Soil Sampling Week 1	43.1819576	-78.688911	4/23/2019	11:40
RI Data	P021	n/a	Q1	2	6	2 to 6	A	Lead	251	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q1	0	2	0 to 2	AA	Lead	223	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q1	0	2	0 to 2	AA	Lead	154	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q1	12	18	12 to 18	C	Lead	152	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q1	18	24	12 to 18	C	Lead	175	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q1	18	24	18 to 24	D	Lead	85.9	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q1	18	24	18 to 24	D	Lead	237	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-1829	P021	S0226	Q2	18	24	18 to 24	D	Lead	8.8		Final	2019 April ERT Soil Sampling Week 1	43.1822237	-78.68845	4/23/2019	10:40
ERT-1830	P021	S0226	Q2	24	30	24 to 30	E	Lead	78		Final	2019 April ERT Soil Sampling Week 1	43.1822237	-78.68845	4/23/2019	10:40
ERT-1805	P021	S0232	Q2	18	24	18 to 24	D	Lead	53		Final	2019 April ERT Soil Sampling Week 1	43.182189	-78.688599	4/23/2019	10:15
ERT-1806	P021	S0232	Q2	24	30	24 to 30	E	Lead	42		Final	2019 April ERT Soil Sampling Week 1	43.182189	-78.688599	4/23/2019	10:15
ERT-1837	P021	S0235	Q2	18	24	18 to 24	D	Lead	35		Final	2019 April ERT Soil Sampling Week 1	43.1820784	-78.688577	4/23/2019	11:00
ERT-1838	P021	S0235	Q2	24	30	24 to 30	E	Lead	21		Final	2019 April ERT Soil Sampling Week 1	43.1820784	-78.688577	4/23/2019	11:00
ERT-1821	P021	S0236	Q2	18	24	18 to 24	D	Lead	39		Final	2019 April ERT Soil Sampling Week 1	43.1821307	-78.688424	4/23/2019	10:50
ERT-1822	P021	S0236	Q2	24	30	24 to 30	E	Lead	17		Final	2019 April ERT Soil Sampling Week 1	43.1821307	-78.688424	4/23/2019	10:50
ERT-1813	P021	S0237	Q2	18	24	18 to 24	D	Lead	65		Final	2019 April ERT Soil Sampling Week 1	43.1821666	-78.68851	4/23/2019	10:25
ERT-1814	P021	S0237	Q2	24	30	24 to 30	E	Lead	55		Final	2019 April ERT Soil Sampling Week 1	43.1821666	-78.68851	4/23/2019	10:25
RI Data	P021	n/a	Q2	2	6	2 to 6	A	Lead	662	n/a	n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P021	n/a	Q2	0	2	0 to 2	AA	Lead	268		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	2	6	2 to 6	AA	Lead	256		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	0	2	0 to 2	AA	Lead	629		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	0	2	0 to 2	AA	Lead	836		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	0	2	0 to 2	AA	Lead	422		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	6	12	6 to 12	B	Lead	738		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	6	12	6 to 12	B	Lead	339		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	18	24	18 to 24	D	Lead	80.1		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	18	24	18 to 24	D	Lead	175		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	18	24	18 to 24	D	Lead	406		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P021	n/a	Q2	18	24	18 to 24	D	Lead	80		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	2	6	2 to 6	A	Lead	322		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	2	6	2 to 6	A	Lead	248		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	0	2	0 to 2	AA	Lead	330		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	0	2	0 to 2	AA	Lead	314		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	0	2	0 to 2	AA	Lead	229		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	18	24	18 to 24	D	Lead	88		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q1	18	24	18 to 24	D	Lead	56.7		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	2	6	2 to 6	A	Lead	374		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	0	2	0 to 2	AA	Lead	607		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	0	2	0 to 2	AA	Lead	548		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	0	2	0 to 2	AA	Lead	243		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	0	2	0 to 2	AA	Lead	345		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	6	12	6 to 12	B	Lead	1340		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	6	12	6 to 12	B	Lead	457		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	6	12	6 to 12	B	Lead	489		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	6	12	6 to 12	B	Lead	311		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	18	24	18 to 24	D	Lead	278		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	18	24	18 to 24	D	Lead	134		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	18	24	18 to 24	D	Lead	41		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P022	n/a	Q2	18	24	18 to 24	D	Lead	108		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-1088	P022	S0136	Q2	18	24	18 to 24	D	Lead	420		Final	2018 November ERT Soil Sampling Week 2	43.1817406	-78.688482	11/26/2018	15:20
ERT-1089	P022	S0136	Q2	24	30	24 to 30	E	Lead	83		Final	2018 November ERT Soil Sampling Week 2	43.1817406	-78.688482	11/26/2018	15:20
ERT-1090	P022	S0136	Q2	30	36	30 to 36	F	Lead	21		Final	2018 November ERT Soil Sampling Week 2	43.1817406	-78.688482	11/26/2018	15:20
ERT-1096	P022	S0137	Q2	18	24	18 to 24	D	Lead	280		Final	2018 November ERT Soil Sampling Week 2	43.1817067	-78.688473	11/26/2018	15:30
ERT-1097	P022	S0137	Q2	24	30	24 to 30	E	Lead	150		Final	2018 November ERT Soil Sampling Week 2	43.1817067	-78.688473	11/26/2018	15:30
ERT-1104	P022	S0138	Q2	18	24	18 to 24	D	Lead	43		Final	2018 November ERT Soil Sampling Week 2	43.1816688	-78.688448	11/26/2018	15:40
ERT-1105	P022	S0138	Q2	24	30	24 to 30	E	Lead	81		Final	2018 November ERT Soil Sampling Week 2	43.1816688	-78.688448	11/26/2018	15:40
ERT-1112	P022	S0139	Q2	18	24	18 to 24	D	Lead	7.9		Final	2018 November ERT Soil Sampling Week 2	43.1816227	-78.688488	11/26/2018	15:50
ERT-1113	P022	S0139	Q2	24	30	24 to 30	E	Lead	6.7	U	Final	2018 November ERT Soil Sampling Week 2	43.1816227	-78.688488	11/26/2018	15:50
RI Data	P023	n/a	Q1	0	2	0 to 2	AA	Lead	160		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	0	2	0 to 2	AA	Lead	237		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	0	2	0 to 2	AA	Lead	248		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	0	2	0 to 2	AA	Lead	33.8		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	12	18	12 to 18	C	Lead	430		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	12	18	12 to 18	C	Lead	47.3		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	18	24	18 to 24	D	Lead	141		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	18	24	18 to 24	D	Lead	34.5		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P023	n/a	Q1	18	24	18 to 24	D	Lead	51.3		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2065	P023	S0258	Q1	18	24	18 to 24	D	Lead	60		Final	2019 April ERT Soil Sampling Week 1	43.1817277	-78.68816	4/24/2019	8:05
ERT-2066	P023	S0258	Q1	24	30	24 to 30	E	Lead	13		Final	2019 April ERT Soil Sampling Week 1	43.1817277	-78.68816	4/24/2019	8:05
RI Data	P024	n/a	Q1	2	6	2 to 6	A	Lead	766		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q1	0	2	0 to 2	AA	Lead	559		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q1	0	2	0 to 2	AA	Lead	637		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q1	6	12	6 to 12	B	Lead	529		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P024	n/a	Q1	18	24	18 to 24	D	Lead	107		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q1	18	24	18 to 24	D	Lead	112		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q1	18	24	18 to 24	D	Lead	41.8		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2166	P024	S0291	Q1	18	24	18 to 24	D	Lead	240		Final	2019 April ERT Soil Sampling Week 1	43.1811531	-78.688411	4/24/2019	9:53
ERT-2167	P024	S0291	Q1	24	30	24 to 30	E	Lead	130		Final	2019 April ERT Soil Sampling Week 1	43.1811531	-78.688411	4/24/2019	9:53
ERT-2174	P024	S0292	Q1	18	24	18 to 24	D	Lead	89		Final	2019 April ERT Soil Sampling Week 1	43.1812536	-78.688506	4/24/2019	10:00
ERT-2175	P024	S0292	Q1	24	30	24 to 30	E	Lead	24	J	Final	2019 April ERT Soil Sampling Week 1	43.1812536	-78.688506	4/24/2019	10:00
RI Data	P024	n/a	Q2	2	6	2 to 6	A	Lead	289		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	2	6	2 to 6	A	Lead	264		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	0	2	0 to 2	AA	Lead	310		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	0	2	0 to 2	AA	Lead	800		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	0	2	0 to 2	AA	Lead	655		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	0	2	0 to 2	AA	Lead	274		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	0	2	0 to 2	AA	Lead	248		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	6	12	6 to 12	B	Lead	731		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	6	12	6 to 12	B	Lead	158		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	6	12	6 to 12	B	Lead	152		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	18	24	18 to 24	D	Lead	34		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	18	24	18 to 24	D	Lead	52.4		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	18	24	18 to 24	D	Lead	75.9		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	18	24	18 to 24	D	Lead	18.9		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P024	n/a	Q2	18	24	18 to 24	D	Lead	27		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2141	P024	S0274	Q2	18	24	18 to 24	D	Lead	6.3		Final	2019 April ERT Soil Sampling Week 1	43.1812905	-78.688032	4/24/2019	9:30
ERT-2142	P024	S0274	Q2	24	30	24 to 30	E	Lead	9.2		Final	2019 April ERT Soil Sampling Week 1	43.1812905	-78.688032	4/24/2019	9:30
ERT-2154	P024	S0274	Q2	24	30	24 to 30	E	Lead	23		Final	2019 April ERT Soil Sampling Week 1	43.1812905	-78.688032	4/24/2019	9:30
ERT-2149	P024	S0279	Q2	18	24	18 to 24	D	Lead	1.6		Final	2019 April ERT Soil Sampling Week 1	43.1812676	-78.688144	4/24/2019	9:40
ERT-2150	P024	S0279	Q2	24	30	24 to 30	E	Lead	3.3		Final	2019 April ERT Soil Sampling Week 1	43.1812676	-78.688144	4/24/2019	9:40
ERT-2158	P024	S0280	Q2	18	24	18 to 24	D	Lead	17		Final	2019 April ERT Soil Sampling Week 1	43.1812345	-78.688247	4/24/2019	9:50
ERT-2159	P024	S0280	Q2	24	30	24 to 30	E	Lead	11		Final	2019 April ERT Soil Sampling Week 1	43.1812345	-78.688247	4/24/2019	9:50
RI Data	P025	n/a	Q1	2	6	2 to 6	A	Lead	327		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q1	0	2	0 to 2	AA	Lead	256		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q1	0	2	0 to 2	AA	Lead	321		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q1	0	2	0 to 2	AA	Lead	325		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q1	6	12	6 to 12	B	Lead	285		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q1	18	24	18 to 24	D	Lead	129		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	18	24	18 to 24	D	Lead	98		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	2	6	2 to 6	A	Lead	399		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	2	6	2 to 6	A	Lead	591		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	2	6	2 to 6	A	Lead	501		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	0	2	0 to 2	AA	Lead	400		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	0	2	0 to 2	AA	Lead	550		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	0	2	0 to 2	AA	Lead	452		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	0	2	0 to 2	AA	Lead	334		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	6	12	6 to 12	B	Lead	301		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	18	24	18 to 24	D	Lead	99.1		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	18	24	18 to 24	D	Lead	66		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	18	24	18 to 24	D	Lead	72.3		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
RI Data	P025	n/a	Q2	18	24	18 to 24	D	Lead	108		n/a	Weston Discrete Risk Sampling	n/a	n/a	2017	n/a
ERT-2254	P025	S0277	Q2	18	24	18 to 24	D	Lead	16		Final	2019 April ERT Soil Sampling Week 1	43.1810782	-78.68792	4/24/2019	11:24
ERT-2255	P025	S0277	Q2	24	30	24 to 30	E	Lead	16	L	Final	2019 April ERT Soil Sampling Week 1	43.1810782	-78.68792	4/24/2019	11:24
ERT-2270	P025	S0278	Q2	18	24	18 to 24	D	Lead	76		Final	2019 April ERT Soil Sampling Week 1	43.1809932	-78.687931	4/24/2019	13:15
ERT-2271	P025	S0278	Q2	24	30	24 to 30	E	Lead	48		Final	2019 April ERT Soil Sampling Week 1	43.1809932	-78.687931	4/24/2019	13:15
ERT-2262	P025	S0284	Q2	18	24	18 to 24	D	Lead	85		Final	2019 April ERT Soil Sampling Week 1	43.181017	-78.688041	4/24/2019	11:30
ERT-2263	P025	S0284	Q2	24	30	24 to 30	E	Lead	32		Final	2019 April ERT Soil Sampling Week 1	43.181017	-78.688041	4/24/2019	11:30
ERT-2286	P025	S0285	Q2	18	24	18 to 24	D	Lead	89		Final	2019 April ERT Soil Sampling Week 1	43.1809836	-78.688012	4/24/2019	13:20

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2287	P025	S0285	Q2	24	30	24 to 30	E	Lead	17		Final	2019 April ERT Soil Sampling Week 1	43.1809836	-78.688012	4/24/2019	13:20
ERT-2278	P025	S0286	Q2	18	24	18 to 24	D	Lead	36		Final	2019 April ERT Soil Sampling Week 1	43.1809508	-78.688087	4/24/2019	13:25
ERT-2279	P025	S0286	Q2	24	30	24 to 30	E	Lead	40		Final	2019 April ERT Soil Sampling Week 1	43.1809508	-78.688087	4/24/2019	13:25
ERT-2267	P025	SW278	Q2	0	6	0 to 6	A	Lead	380		Final	2019 April ERT Soil Sampling Week 1	43.1809932	-78.687931	4/24/2019	13:15
ERT-2283	P025	SW285	Q2	0	6	0 to 6	A	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1809836	-78.688012	4/24/2019	13:20
ERT-2275	P025	SW286	Q2	0	6	0 to 6	A	Lead	180		Final	2019 April ERT Soil Sampling Week 1	43.1809508	-78.688087	4/24/2019	13:25
RI Data	P026	n/a	Q1	2	6	2 to 6	A	Lead	63		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q1	0	2	0 to 2	AA	Lead	564		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q1	6	12	6 to 12	B	Lead	205		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q1	12	18	12 to 18	C	Lead	199		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q1	18	24	18 to 24	D	Lead	82		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0060	P026	S0008	Q1	6	12	6 to 12	B	Lead	47		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0060D	P026	S0008	Q1	6	12	6 to 12	B	Lead	76		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0061	P026	S0008	Q1	12	18	12 to 18	C	Lead	7.8		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0061D	P026	S0008	Q1	12	18	12 to 18	C	Lead	6.6		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0062	P026	S0008	Q1	18	24	18 to 24	D	Lead	31		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0062D	P026	S0008	Q1	18	24	18 to 24	D	Lead	27		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0063	P026	S0008	Q1	24	30	24 to 30	E	Lead	11		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0063D	P026	S0008	Q1	24	30	24 to 30	E	Lead	11		Final	2018 November ERT Soil Sampling Week 1	43.1822028	-78.688319	11/12/2018	13:40
ERT-0068	P026	S0009	Q1	6	12	6 to 12	B	Lead	89		Final	2018 November ERT Soil Sampling Week 1	43.182121	-78.688294	11/12/2018	14:10
ERT-0069	P026	S0009	Q1	12	18	12 to 18	C	Lead	31		Final	2018 November ERT Soil Sampling Week 1	43.182121	-78.688294	11/12/2018	14:10
ERT-0070	P026	S0009	Q1	18	24	18 to 24	D	Lead	22		Final	2018 November ERT Soil Sampling Week 1	43.182121	-78.688294	11/12/2018	14:10
ERT-0076	P026	S0010	Q1	6	12	6 to 12	B	Lead	50		Final	2018 November ERT Soil Sampling Week 1	43.182161	-78.68817	11/12/2018	14:25
ERT-0077	P026	S0010	Q1	12	18	12 to 18	C	Lead	150		Final	2018 November ERT Soil Sampling Week 1	43.182161	-78.68817	11/12/2018	14:25
ERT-0078	P026	S0010	Q1	18	24	18 to 24	D	Lead	160		Final	2018 November ERT Soil Sampling Week 1	43.182161	-78.68817	11/12/2018	14:25
ERT-0084	P026	S0011	Q1	6	12	6 to 12	B	Lead	250		Final	2018 November ERT Soil Sampling Week 1	43.182241	-78.688196	11/12/2018	14:40
ERT-0085	P026	S0011	Q1	12	18	12 to 18	C	Lead	170		Final	2018 November ERT Soil Sampling Week 1	43.182241	-78.688196	11/12/2018	14:40
RI Data	P026	n/a	Q2	2	6	2 to 6	A	Lead	236		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q2	0	2	0 to 2	AA	Lead	226		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q2	6	12	6 to 12	B	Lead	298		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q2	12	18	12 to 18	C	Lead	741		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q2	18	24	18 to 24	D	Lead	389		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0004	P026	S0001	Q2	18	24	18 to 24	D	Lead	27		Final	2018 November ERT Soil Sampling Week 1	43.1824406	-78.68842	11/12/2018	9:30
ERT-0005	P026	S0001	Q2	24	30	24 to 30	E	Lead	21		Final	2018 November ERT Soil Sampling Week 1	43.1824406	-78.68842	11/12/2018	9:30
ERT-0012	P026	S0002	Q2	18	24	18 to 24	D	Lead	24		Final	2018 November ERT Soil Sampling Week 1	43.1824844	-78.688321	11/12/2018	10:00
ERT-0013	P026	S0002	Q2	24	30	24 to 30	E	Lead	19		Final	2018 November ERT Soil Sampling Week 1	43.1824844	-78.688321	11/12/2018	10:00
ERT-0044	P026	S0006	Q2	18	24	18 to 24	D	Lead	150		Final	2018 November ERT Soil Sampling Week 1	43.182366	-78.688385	11/12/2018	12:50
ERT-0045	P026	S0006	Q2	24	30	24 to 30	E	Lead	62		Final	2018 November ERT Soil Sampling Week 1	43.182366	-78.688385	11/12/2018	12:50
ERT-0046	P026	S0006	Q2	30	36	30 to 36	F	Lead	43		Final	2018 November ERT Soil Sampling Week 1	43.182366	-78.688385	11/12/2018	12:50
ERT-0046D	P026	S0006	Q2	30	36	30 to 36	F	Lead	37		Final	2018 November ERT Soil Sampling Week 1	43.182366	-78.688385	11/12/2018	12:50
ERT-0047	P026	S0006	Q2	36	42	36 to 42	G	Lead	9.4		Final	2018 November ERT Soil Sampling Week 1	43.182366	-78.688385	11/12/2018	12:50
ERT-0047D	P026	S0006	Q2	36	42	36 to 42	G	Lead	7.2		Final	2018 November ERT Soil Sampling Week 1	43.182366	-78.688385	11/12/2018	12:50
ERT-0054	P026	S0007	Q2	18	24	18 to 24	D	Lead	2.1		Final	2018 November ERT Soil Sampling Week 1	43.1822814	-78.688369	11/12/2018	13:15
ERT-0055	P026	S0007	Q2	24	30	24 to 30	E	Lead	2400		Final	2018 November ERT Soil Sampling Week 1	43.1822814	-78.688369	11/12/2018	13:15
ERT-0056	P026	S0007	Q2	30	36	30 to 36	F	Lead	84		Final	2018 November ERT Soil Sampling Week 1	43.1822814	-78.688369	11/12/2018	13:15
ERT-0057	P026	S0007	Q2	36	42	36 to 42	G	Lead	26		Final	2018 November ERT Soil Sampling Week 1	43.1822814	-78.688369	11/12/2018	13:15
ERT-0094	P026	S0012	Q2	18	24	18 to 24	D	Lead	51		Final	2018 November ERT Soil Sampling Week 1	43.1823062	-78.688281	11/12/2018	15:00
ERT-0095	P026	S0012	Q2	24	30	24 to 30	E	Lead	49		Final	2018 November ERT Soil Sampling Week 1	43.1823062	-78.688281	11/12/2018	15:00
ERT-0102	P026	S0013	Q2	18	24	18 to 24	D	Lead	480		Final	2018 November ERT Soil Sampling Week 1	43.1823919	-78.688268	11/12/2018	15:10
ERT-0103	P026	S0013	Q2	24	30	24 to 30	E	Lead	14		Final	2018 November ERT Soil Sampling Week 1	43.1823919	-78.688268	11/12/2018	15:10
ERT-3056	P026	SW372	Q2	0	6	0 to 6	A	Lead	98		Final	2019 June Delineation Sampling	43.1823846	-78.688193	6/12/2019	13:54
ERT-3057	P026	SW372	Q2	6	12	6 to 12	B	Lead	490		Final	2019 June Delineation Sampling	43.1823846	-78.688193	6/12/2019	13:54
ERT-3058	P026	SW372	Q2	12	18	12 to 18	C	Lead	390		Final	2019 June Delineation Sampling	43.1823846	-78.688193	6/12/2019	13:54
ERT-3060	P026	SW373	Q2	0	6	0 to 6	A	Lead	460		Final	2019 June Delineation Sampling	43.1824819	-78.688232	6/12/2019	14:00
ERT-3061	P026	SW373	Q2	6	12	6 to 12	B	Lead	1300		Final	2019 June Delineation Sampling	43.1824819	-78.688232	6/12/2019	14:00

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-3062	P026	SW373	Q2	12	18	12 to 18	C	Lead	2500		Final	2019 June Delineation Sampling	43.1824819	-78.688232	6/12/2019	14:00
ERT-3109	P026	SW382	Q2	0	6	0 to 6	A	Lead	160		Final	2019 June Delineation Sampling	43.1825169	-78.688246	6/12/2019	15:15
ERT-3110	P026	SW382	Q2	6	12	6 to 12	B	Lead	210		Final	2019 June Delineation Sampling	43.1825169	-78.688246	6/12/2019	15:15
RI Data	P026	n/a	Q3	2	6	2 to 6	A	Lead	187		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q3	0	2	0 to 2	AA	Lead	187		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q3	0	2	0 to 2	AA	Lead	184		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q3	6	12	6 to 12	B	Lead	225		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q3	12	18	12 to 18	C	Lead	226		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q3	18	24	18 to 24	D	Lead	1180		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0111	P026	S0014	Q3	24	30	24 to 30	E	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1822588	-78.688102	11/12/2018	15:30
ERT-0112	P026	S0014	Q3	30	36	30 to 36	F	Lead	19		Final	2018 November ERT Soil Sampling Week 1	43.1822588	-78.688102	11/12/2018	15:30
ERT-0119	P026	S0015	Q3	24	30	24 to 30	E	Lead	52		Final	2018 November ERT Soil Sampling Week 1	43.1821857	-78.688077	11/12/2018	15:40
ERT-0120	P026	S0015	Q3	30	36	30 to 36	F	Lead	27		Final	2018 November ERT Soil Sampling Week 1	43.1821857	-78.688077	11/12/2018	15:40
ERT-0127	P026	S0016	Q3	24	30	24 to 30	E	Lead	26		Final	2018 November ERT Soil Sampling Week 1	43.1822129	-78.687946	11/12/2018	16:00
ERT-0128	P026	S0016	Q3	30	36	30 to 36	F	Lead	9.3		Final	2018 November ERT Soil Sampling Week 1	43.1822129	-78.687946	11/12/2018	16:00
ERT-0135	P026	S0017	Q3	24	30	24 to 30	E	Lead	32		Final	2018 November ERT Soil Sampling Week 1	43.1822094	-78.68789	11/12/2018	16:05
ERT-0136	P026	S0017	Q3	30	36	30 to 36	F	Lead	16		Final	2018 November ERT Soil Sampling Week 1	43.1822094	-78.68789	11/12/2018	16:05
ERT-0141	P026	S0018	Q3	12	18	12 to 18	C	Lead	34		Final	2018 November ERT Soil Sampling Week 1	43.1822728	-78.68799	11/13/2018	8:15
ERT-0142	P026	S0018	Q3	18	24	18 to 24	D	Lead	37		Final	2018 November ERT Soil Sampling Week 1	43.1822728	-78.68799	11/13/2018	8:15
ERT-0144	P026	S0018	Q3	30	36	30 to 36	F	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1822728	-78.68799	11/13/2018	8:15
ERT-3046	P026	SW370	Q3	0	6	0 to 6	A	Lead	230		Final	2019 June Delineation Sampling	43.1823307	-78.688033	6/12/2019	13:44
ERT-3047	P026	SW370	Q3	6	12	6 to 12	B	Lead	480		Final	2019 June Delineation Sampling	43.1823307	-78.688033	6/12/2019	13:44
ERT-3049	P026	SW370	Q3	18	24	18 to 24	D	Lead	40		Final	2019 June Delineation Sampling	43.1823307	-78.688033	6/12/2019	13:44
ERT-3051	P026	SW371	Q3	0	6	0 to 6	A	Lead	120		Final	2019 June Delineation Sampling	43.1823084	-78.68814	6/12/2019	13:30
ERT-3052	P026	SW371	Q3	6	12	6 to 12	B	Lead	110		Final	2019 June Delineation Sampling	43.1823084	-78.68814	6/12/2019	13:30
ERT-3054	P026	SW371	Q3	18	24	18 to 24	D	Lead	290		Final	2019 June Delineation Sampling	43.1823084	-78.68814	6/12/2019	13:30
RI Data	P026	n/a	Q4	2	6	2 to 6	A	Lead	350		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q4	0	2	0 to 2	AA	Lead	155		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q4	6	12	6 to 12	B	Lead	271		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q4	6	12	6 to 12	B	Lead	246		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q4	12	18	12 to 18	C	Lead	205		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q4	18	24	18 to 24	D	Lead	187		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q5	2	6	2 to 6	A	Lead	801		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q5	0	2	0 to 2	AA	Lead	534		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q5	6	12	6 to 12	B	Lead	614		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q5	12	18	12 to 18	C	Lead	104		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q5	18	24	18 to 24	D	Lead	70.9		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0149	P026	S0019	Q5	12	18	12 to 18	C	Lead	250		Final	2018 November ERT Soil Sampling Week 1	43.1823056	-78.687879	11/13/2018	8:30
ERT-0150	P026	S0019	Q5	18	24	18 to 24	D	Lead	65		Final	2018 November ERT Soil Sampling Week 1	43.1823056	-78.687879	11/13/2018	8:30
ERT-0157	P026	S0020	Q5	12	18	12 to 18	C	Lead	33		Final	2018 November ERT Soil Sampling Week 1	43.1823312	-78.687784	11/13/2018	8:45
ERT-0158	P026	S0020	Q5	18	24	18 to 24	D	Lead	10		Final	2018 November ERT Soil Sampling Week 1	43.1823312	-78.687784	11/13/2018	8:45
RI Data	P026	n/a	Q6	2	6	2 to 6	A	Lead	668		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q6	0	2	0 to 2	AA	Lead	597		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q6	6	12	6 to 12	B	Lead	527		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q6	12	18	12 to 18	C	Lead	387		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q6	18	24	18 to 24	D	Lead	312		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0019	P026	S0003	Q6	12	18	12 to 18	C	Lead	190		Final	2018 November ERT Soil Sampling Week 1	43.1825758	-78.688004	11/12/2018	10:35
ERT-0020	P026	S0003	Q6	18	24	18 to 24	D	Lead	200		Final	2018 November ERT Soil Sampling Week 1	43.1825758	-78.688004	11/12/2018	10:35
ERT-0021	P026	S0003	Q6	24	30	24 to 30	E	Lead	95	J	Final	2018 November ERT Soil Sampling Week 1	43.1825758	-78.688004	11/12/2018	10:35
ERT-0022	P026	S0003	Q6	30	36	30 to 36	F	Lead	20	J	Final	2018 November ERT Soil Sampling Week 1	43.1825758	-78.688004	11/12/2018	10:35
ERT-0027	P026	S0004	Q6	12	18	12 to 18	C	Lead	72		Final	2018 November ERT Soil Sampling Week 1	43.1825851	-78.687904	11/12/2018	11:10
ERT-0028	P026	S0004	Q6	18	24	18 to 24	D	Lead	47		Final	2018 November ERT Soil Sampling Week 1	43.1825851	-78.687904	11/12/2018	11:10
ERT-0035	P026	S0005	Q6	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 1	43.1826117	-78.687826	11/12/2018	11:35
ERT-0036	P026	S0005	Q6	18	24	18 to 24	D	Lead	70		Final	2018 November ERT Soil Sampling Week 1	43.1826117	-78.687826	11/12/2018	11:35
ERT-0230	P026	S0029	Q6	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1824028	-78.687932	11/13/2018	11:00

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-0231	P026	S0029	Q6	18	24	18 to 24	D	Lead	500		Final	2018 November ERT Soil Sampling Week 1	43.1824028	-78.687932	11/13/2018	11:00
ERT-0232	P026	S0029	Q6	24	30	24 to 30	E	Lead	51		Final	2018 November ERT Soil Sampling Week 1	43.1824028	-78.687932	11/13/2018	11:00
ERT-0238	P026	S0030	Q6	12	18	12 to 18	C	Lead	55		Final	2018 November ERT Soil Sampling Week 1	43.1824444	-78.687846	11/13/2018	11:15
ERT-0239	P026	S0030	Q6	18	24	18 to 24	D	Lead	29		Final	2018 November ERT Soil Sampling Week 1	43.1824444	-78.687846	11/13/2018	11:15
ERT-0246	P026	S0031	Q6	12	18	12 to 18	C	Lead	450		Final	2018 November ERT Soil Sampling Week 1	43.1824592	-78.687761	11/13/2018	11:30
ERT-0247	P026	S0031	Q6	18	24	18 to 24	D	Lead	420		Final	2018 November ERT Soil Sampling Week 1	43.1824592	-78.687761	11/13/2018	11:30
ERT-0248	P026	S0031	Q6	24	30	24 to 30	E	Lead	14		Final	2018 November ERT Soil Sampling Week 1	43.1824592	-78.687761	11/13/2018	11:30
ERT-0254	P026	S0032	Q6	12	18	12 to 18	C	Lead	880		Final	2018 November ERT Soil Sampling Week 1	43.1825301	-78.687802	11/13/2018	11:45
ERT-0255	P026	S0032	Q6	18	24	18 to 24	D	Lead	300		Final	2018 November ERT Soil Sampling Week 1	43.1825301	-78.687802	11/13/2018	11:45
ERT-0256	P026	S0032	Q6	24	30	24 to 30	E	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1825301	-78.687802	11/13/2018	11:45
ERT-0262	P026	S0033	Q6	12	18	12 to 18	C	Lead	100		Final	2018 November ERT Soil Sampling Week 1	43.1824987	-78.68791	11/13/2018	11:55
ERT-0263	P026	S0033	Q6	18	24	18 to 24	D	Lead	74		Final	2018 November ERT Soil Sampling Week 1	43.1824987	-78.68791	11/13/2018	11:55
ERT-0270	P026	S0034	Q6	12	18	12 to 18	C	Lead	360		Final	2018 November ERT Soil Sampling Week 1	43.1824939	-78.687979	11/13/2018	12:00
ERT-0270D	P026	S0034	Q6	12	18	12 to 18	C	Lead	350		Final	2018 November ERT Soil Sampling Week 1	43.1824939	-78.687979	11/13/2018	12:00
ERT-0271	P026	S0034	Q6	18	24	18 to 24	D	Lead	72		Final	2018 November ERT Soil Sampling Week 1	43.1824939	-78.687979	11/13/2018	12:00
ERT-0271D	P026	S0034	Q6	18	24	18 to 24	D	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1824939	-78.687979	11/13/2018	12:00
ERT-3042	P026	SW368	Q6	0	6	0 to 6	A	Lead	52		Final	2019 June Delineation Sampling	43.1824426	-78.687969	6/12/2019	13:14
ERT-3043	P026	SW368	Q6	6	12	6 to 12	B	Lead	270		Final	2019 June Delineation Sampling	43.1824426	-78.687969	6/12/2019	13:14
ERT-3038	P026	SW369	Q6	0	6	0 to 6	A	Lead	2600		Final	2019 June Delineation Sampling	43.1825114	-78.688002	6/12/2019	13:05
ERT-3039	P026	SW369	Q6	6	12	6 to 12	B	Lead	2800		Final	2019 June Delineation Sampling	43.1825114	-78.688002	6/12/2019	13:05
ERT-3130	P026	SW381	Q6	0	6	0 to 6	A	Lead	180		Final	2019 June Delineation Sampling	43.182545	-78.688009	6/12/2019	15:53
ERT-3131	P026	SW381	Q6	6	12	6 to 12	B	Lead	190		Final	2019 June Delineation Sampling	43.182545	-78.688009	6/12/2019	15:53
ERT-3134	P026	SW383	Q6	0	6	0 to 6	A	Lead	330		Final	2019 June Delineation Sampling	43.1825948	-78.68772	6/12/2019	16:03
ERT-3135	P026	SW383	Q6	6	12	6 to 12	B	Lead	6100		Final	2019 June Delineation Sampling	43.1825948	-78.68772	6/12/2019	16:03
RI Data	P026	n/a	Q7	2	6	2 to 6	A	Lead	229		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q7	0	2	0 to 2	AA	Lead	186		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q7	6	12	6 to 12	B	Lead	297		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q7	12	18	12 to 18	C	Lead	712		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q7	18	24	18 to 24	D	Lead	861		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0167	P026	S0021	Q7	24	30	24 to 30	E	Lead	28		Final	2018 November ERT Soil Sampling Week 1	43.1823551	-78.687688	11/13/2018	9:00
ERT-0168	P026	S0021	Q7	30	36	30 to 36	F	Lead	20		Final	2018 November ERT Soil Sampling Week 1	43.1823551	-78.687688	11/13/2018	9:00
ERT-0175	P026	S0022	Q7	24	30	24 to 30	E	Lead	55		Final	2018 November ERT Soil Sampling Week 1	43.1824498	-78.68763	11/13/2018	9:10
ERT-0176	P026	S0022	Q7	30	36	30 to 36	F	Lead	19		Final	2018 November ERT Soil Sampling Week 1	43.1824498	-78.68763	11/13/2018	9:10
ERT-0176D	P026	S0022	Q7	30	36	30 to 36	F	Lead	48		Final	2018 November ERT Soil Sampling Week 1	43.1824498	-78.68763	11/13/2018	9:10
ERT-0184	P026	S0023	Q7	24	30	24 to 30	E	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1822723	-78.687586	11/13/2018	9:30
ERT-0185	P026	S0023	Q7	30	36	30 to 36	F	Lead	19		Final	2018 November ERT Soil Sampling Week 1	43.1822723	-78.687586	11/13/2018	9:30
ERT-0192	P026	S0024	Q7	24	30	24 to 30	E	Lead	14		Final	2018 November ERT Soil Sampling Week 1	43.1823266	-78.687504	11/13/2018	9:50
ERT-0193	P026	S0024	Q7	30	36	30 to 36	F	Lead	15		Final	2018 November ERT Soil Sampling Week 1	43.1823266	-78.687504	11/13/2018	9:50
ERT-0200	P026	S0025	Q7	24	30	24 to 30	E	Lead	25		Final	2018 November ERT Soil Sampling Week 1	43.1823253	-78.687397	11/13/2018	10:00
ERT-0201	P026	S0025	Q7	30	36	30 to 36	F	Lead	20		Final	2018 November ERT Soil Sampling Week 1	43.1823253	-78.687397	11/13/2018	10:00
ERT-0208	P026	S0026	Q7	24	30	24 to 30	E	Lead	13		Final	2018 November ERT Soil Sampling Week 1	43.1824034	-78.687438	11/13/2018	10:10
ERT-0208D	P026	S0026	Q7	24	30	24 to 30	E	Lead	22		Final	2018 November ERT Soil Sampling Week 1	43.1824034	-78.687438	11/13/2018	10:10
ERT-0209	P026	S0026	Q7	30	36	30 to 36	F	Lead	21		Final	2018 November ERT Soil Sampling Week 1	43.1824034	-78.687438	11/13/2018	10:10
ERT-0216	P026	S0027	Q7	24	30	24 to 30	E	Lead	41		Final	2018 November ERT Soil Sampling Week 1	43.1824507	-78.687452	11/13/2018	10:30
ERT-0217	P026	S0027	Q7	30	36	30 to 36	F	Lead	24		Final	2018 November ERT Soil Sampling Week 1	43.1824507	-78.687452	11/13/2018	10:30
ERT-0224	P026	S0028	Q7	24	30	24 to 30	E	Lead	350		Final	2018 November ERT Soil Sampling Week 1	43.1823965	-78.687555	11/13/2018	10:35
ERT-0225	P026	S0028	Q7	30	36	30 to 36	F	Lead	13		Final	2018 November ERT Soil Sampling Week 1	43.1823965	-78.687555	11/13/2018	10:35
ERT-0226	P026	S0028	Q7	36	42	36 to 42	G	Lead	9.6		Final	2018 November ERT Soil Sampling Week 1	43.1823965	-78.687555	11/13/2018	10:35
RI Data	P026	n/a	Q8	2	6	2 to 6	A	Lead	191		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q8	0	2	0 to 2	AA	Lead	161		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q8	6	12	6 to 12	B	Lead	200		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q8	12	18	12 to 18	C	Lead	197		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P026	n/a	Q8	18	24	18 to 24	D	Lead	264		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-3106	P026	SW384	Q8	12	18	12 to 18	C	Lead	310		Final	2019 June Delineation Sampling	43.1824941	-78.687505	6/12/2019	15:00
ERT-3107	P026	SW384	Q8	18	24	18 to 24	D	Lead	310		Final	2019 June Delineation Sampling	43.1824941	-78.687505	6/12/2019	15:00

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-3140	P026	SW385	Q8	12	18	12 to 18	C	Lead	240		Final	2019 June Delineation Sampling	43.1826351	-78.687543	6/12/2019	16:14
ERT-3141	P026	SW385	Q8	18	24	18 to 24	D	Lead	250		Final	2019 June Delineation Sampling	43.1826351	-78.687543	6/12/2019	16:14
ERT-3144	P026	SW386	Q8	12	18	12 to 18	C	Lead	150		Final	2019 June Delineation Sampling	43.1825411	-78.687512	6/12/2019	16:26
ERT-3145	P026	SW386	Q8	18	24	18 to 24	D	Lead	180		Final	2019 June Delineation Sampling	43.1825411	-78.687512	6/12/2019	16:26
RI Data	P027	n/a	Q1	2	6	2 to 6	A	Lead	482		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q1	0	2	0 to 2	AA	Lead	462		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q1	6	12	6 to 12	B	Lead	211		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q1	12	18	12 to 18	C	Lead	85.3		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q1	18	24	18 to 24	D	Lead	73.6		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1286	P027	S0161	Q1	6	12	6 to 12	B	Lead	240		Final	2018 November ERT Soil Sampling Week 2	43.1816404	-78.687918	11/27/2018	13:35
ERT-1287	P027	S0161	Q1	12	18	12 to 18	C	Lead	36		Final	2018 November ERT Soil Sampling Week 2	43.1816404	-78.687918	11/27/2018	13:35
ERT-1294	P027	S0162	Q1	6	12	6 to 12	B	Lead	260		Final	2018 November ERT Soil Sampling Week 2	43.1816146	-78.687998	11/27/2018	13:45
ERT-1294D	P027	S0162	Q1	6	12	6 to 12	B	Lead	170		Final	2018 November ERT Soil Sampling Week 2	43.1816146	-78.687998	11/27/2018	13:45
ERT-1295	P027	S0162	Q1	12	18	12 to 18	C	Lead	68		Final	2018 November ERT Soil Sampling Week 2	43.1816146	-78.687998	11/27/2018	13:45
ERT-1302	P027	S0163	Q1	6	12	6 to 12	B	Lead	64		Final	2018 November ERT Soil Sampling Week 2	43.1815813	-78.687944	11/27/2018	13:55
ERT-1303	P027	S0163	Q1	12	18	12 to 18	C	Lead	37		Final	2018 November ERT Soil Sampling Week 2	43.1815813	-78.687944	11/27/2018	13:55
ERT-1310	P027	S0164	Q1	6	12	6 to 12	B	Lead	340		Final	2018 November ERT Soil Sampling Week 2	43.1815608	-78.687895	11/27/2018	14:05
ERT-1311	P027	S0164	Q1	12	18	12 to 18	C	Lead	150		Final	2018 November ERT Soil Sampling Week 2	43.1815608	-78.687895	11/27/2018	14:05
ERT-1318	P027	S0165	Q1	6	12	6 to 12	B	Lead	400		Final	2018 November ERT Soil Sampling Week 2	43.181469	-78.687824	11/27/2018	14:15
ERT-1319	P027	S0165	Q1	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 2	43.181469	-78.687824	11/27/2018	14:15
RI Data	P027	n/a	Q2	2	6	2 to 6	A	Lead	443		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q2	0	2	0 to 2	AA	Lead	435		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q2	6	12	6 to 12	B	Lead	233		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q2	12	18	12 to 18	C	Lead	216		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P027	n/a	Q2	18	24	18 to 24	D	Lead	101		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1270	P027	S0159	Q2	6	12	6 to 12	B	Lead	380		Final	2018 November ERT Soil Sampling Week 2	43.181691	-78.687707	11/27/2018	13:15
ERT-1271	P027	S0159	Q2	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 2	43.181691	-78.687707	11/27/2018	13:15
ERT-1278	P027	S0160	Q2	6	12	6 to 12	B	Lead	190		Final	2018 November ERT Soil Sampling Week 2	43.1816811	-78.687813	11/27/2018	13:25
ERT-1279	P027	S0160	Q2	12	18	12 to 18	C	Lead	39		Final	2018 November ERT Soil Sampling Week 2	43.1816811	-78.687813	11/27/2018	13:25
ERT-1326	P027	S0166	Q2	6	12	6 to 12	B	Lead	290		Final	2018 November ERT Soil Sampling Week 2	43.1815216	-78.687733	11/27/2018	14:25
ERT-1327	P027	S0166	Q2	12	18	12 to 18	C	Lead	270		Final	2018 November ERT Soil Sampling Week 2	43.1815216	-78.687733	11/27/2018	14:25
ERT-1328	P027	S0166	Q2	18	24	18 to 24	D	Lead	22		Final	2018 November ERT Soil Sampling Week 2	43.1815216	-78.687733	11/27/2018	14:25
ERT-1329	P027	S0166	Q2	24	30	24 to 30	E	Lead	12		Final	2018 November ERT Soil Sampling Week 2	43.1815216	-78.687733	11/27/2018	14:25
ERT-1334	P027	S0167	Q2	6	12	6 to 12	B	Lead	470		Final	2018 November ERT Soil Sampling Week 2	43.1815553	-78.687616	11/27/2018	14:35
ERT-1335	P027	S0167	Q2	12	18	12 to 18	C	Lead	44		Final	2018 November ERT Soil Sampling Week 2	43.1815553	-78.687616	11/27/2018	14:35
ERT-1342	P027	S0168	Q2	6	12	6 to 12	B	Lead	180		Final	2018 November ERT Soil Sampling Week 2	43.1816048	-78.687628	11/27/2018	14:45
ERT-1343	P027	S0168	Q2	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 2	43.1816048	-78.687628	11/27/2018	14:45
ERT-2991	P027	SW356	Q2	0	6	0 to 6	A	Lead	94		Final	2019 June Delineation Sampling	43.1816602	-78.687635	6/11/2019	15:47
ERT-2992	P027	SW356	Q2	6	12	6 to 12	B	Lead	470		Final	2019 June Delineation Sampling	43.1816602	-78.687635	6/11/2019	15:47
RI Data	P028	n/a	Q1	2	6	2 to 6	A	Lead	362		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q1	0	2	0 to 2	AA	Lead	297		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q1	6	12	6 to 12	B	Lead	257		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q1	12	18	12 to 18	C	Lead	219		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q1	18	24	18 to 24	D	Lead	166		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q2	2	6	2 to 6	A	Lead	380		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q2	0	2	0 to 2	AA	Lead	242		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q2	6	12	6 to 12	B	Lead	345		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q2	12	18	12 to 18	C	Lead	22		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P028	n/a	Q2	18	24	18 to 24	D	Lead	450		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1249	P028	S0156	Q2	24	30	24 to 30	E	Lead	63		Final	2018 November ERT Soil Sampling Week 2	43.1815977	-78.687563	11/27/2018	11:30
ERT-1250	P028	S0156	Q2	30	36	30 to 36	F	Lead	51		Final	2018 November ERT Soil Sampling Week 2	43.1815977	-78.687563	11/27/2018	11:30
ERT-1257	P028	S0157	Q2	24	30	24 to 30	E	Lead	54		Final	2018 November ERT Soil Sampling Week 2	43.1816287	-78.687471	11/27/2018	11:40
ERT-1258	P028	S0157	Q2	30	36	30 to 36	F	Lead	7.4	U	Final	2018 November ERT Soil Sampling Week 2	43.1816287	-78.687471	11/27/2018	11:40
ERT-1265	P028	S0158	Q2	24	30	24 to 30	E	Lead	94		Final	2018 November ERT Soil Sampling Week 2	43.1815301	-78.687515	11/27/2018	11:55
ERT-1266	P028	S0158	Q2	30	36	30 to 36	F	Lead	58		Final	2018 November ERT Soil Sampling Week 2	43.1815301	-78.687515	11/27/2018	11:55

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2984	P028	SW362	Q2	12	18	12 to 18	C	Lead	450		Final	2019 June Delineation Sampling	43.1816046	-78.687414	6/11/2019	15:30
ERT-2985	P028	SW362	Q2	18	24	18 to 24	D	Lead	16		Final	2019 June Delineation Sampling	43.1816046	-78.687414	6/11/2019	15:30
ERT-2986	P028	SW362	Q2	0	6	0 to 6	A	Lead	250		Final	2019 June Delineation Sampling	43.1816268	-78.687611	6/11/2019	15:53
ERT-2987	P028	SW363	Q2	6	12	6 to 12	B	Lead	430		Final	2019 June Delineation Sampling	43.1816268	-78.687611	6/11/2019	15:53
RI Data	P029	n/a	Q1	2	6	2 to 6	A	Lead	273		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q1	0	2	0 to 2	AA	Lead	199		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q1	6	12	6 to 12	B	Lead	204		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q1	12	18	12 to 18	C	Lead	190		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q1	18	24	18 to 24	D	Lead	44		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q2	2	6	2 to 6	A	Lead	547		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q2	2	6	2 to 6	A	Lead	488		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q2	0	2	0 to 2	AA	Lead	201		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q2	6	12	6 to 12	B	Lead	388		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q2	12	18	12 to 18	C	Lead	144		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P029	n/a	Q2	18	24	18 to 24	D	Lead	158		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0702	P029	S0088	Q2	6	12	6 to 12	B	Lead	390		Final	2018 November ERT Soil Sampling Week 1	43.1821073	-78.687478	11/15/2018	14:15
ERT-0703	P029	S0088	Q2	12	18	12 to 18	C	Lead	61		Final	2018 November ERT Soil Sampling Week 1	43.1821073	-78.687478	11/15/2018	14:15
ERT-0708	P029	S0088	Q2	42	48	42 to 48	H	Lead	6		Final	2018 November ERT Soil Sampling Week 1	43.1821073	-78.687478	11/15/2018	14:15
ERT-0710	P029	S0089	Q2	6	12	6 to 12	B	Lead	270		Final	2018 November ERT Soil Sampling Week 1	43.1821526	-78.687502	11/15/2018	14:30
ERT-0711	P029	S0089	Q2	12	18	12 to 18	C	Lead	74		Final	2018 November ERT Soil Sampling Week 1	43.1821526	-78.687502	11/15/2018	14:30
ERT-0711D	P029	S0089	Q2	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1821526	-78.687502	11/15/2018	14:30
ERT-0716	P029	S0089	Q2	42	48	42 to 48	H	Lead	1.3		Final	2018 November ERT Soil Sampling Week 1	43.1821526	-78.687502	11/15/2018	14:30
ERT-0718	P029	S0090	Q2	6	12	6 to 12	B	Lead	450		Final	2018 November ERT Soil Sampling Week 1	43.1822235	-78.687542	11/15/2018	14:45
ERT-0719	P029	S0090	Q2	12	18	12 to 18	C	Lead	400		Final	2018 November ERT Soil Sampling Week 1	43.1822235	-78.687542	11/15/2018	14:45
ERT-0720	P029	S0090	Q2	18	24	18 to 24	D	Lead	240		Final	2018 November ERT Soil Sampling Week 1	43.1822235	-78.687542	11/15/2018	14:45
ERT-0721	P029	S0090	Q2	24	30	24 to 30	E	Lead	32		Final	2018 November ERT Soil Sampling Week 1	43.1822235	-78.687542	11/15/2018	14:45
ERT-0723	P029	S0090	Q2	36	42	36 to 42	G	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1822235	-78.687542	11/15/2018	14:45
ERT-0726	P029	S0091	Q2	6	12	6 to 12	B	Lead	700		Final	2018 November ERT Soil Sampling Week 1	43.1822352	-78.687478	11/15/2018	15:00
ERT-0727	P029	S0091	Q2	12	18	12 to 18	C	Lead	55		Final	2018 November ERT Soil Sampling Week 1	43.1822352	-78.687478	11/15/2018	15:00
ERT-0732	P029	S0091	Q2	42	48	42 to 48	H	Lead	8.4		Final	2018 November ERT Soil Sampling Week 1	43.1822352	-78.687478	11/15/2018	15:00
ERT-0734	P029	S0092	Q2	6	12	6 to 12	B	Lead	93		Final	2018 November ERT Soil Sampling Week 1	43.1821743	-78.687436	11/15/2018	15:10
ERT-0735	P029	S0092	Q2	12	18	12 to 18	C	Lead	7.3	U	Final	2018 November ERT Soil Sampling Week 1	43.1821743	-78.687436	11/15/2018	15:10
ERT-0739	P029	S0092	Q2	36	42	36 to 42	G	Lead	9.7		Final	2018 November ERT Soil Sampling Week 1	43.1821743	-78.687436	11/15/2018	15:10
ERT-0742	P029	S0093	Q2	6	12	6 to 12	B	Lead	390		Final	2018 November ERT Soil Sampling Week 1	43.1821649	-78.687309	11/15/2018	15:20
ERT-0743	P029	S0093	Q2	12	18	12 to 18	C	Lead	89		Final	2018 November ERT Soil Sampling Week 1	43.1821649	-78.687309	11/15/2018	15:20
ERT-0748	P029	S0093	Q2	42	48	42 to 48	H	Lead	13		Final	2018 November ERT Soil Sampling Week 1	43.1821649	-78.687309	11/15/2018	15:20
RI Data	P030	n/a	Q1	2	6	2 to 6	A	Lead	122		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q1	0	2	0 to 2	AA	Lead	120		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q1	6	12	6 to 12	B	Lead	47		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q1	12	18	12 to 18	C	Lead	37		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q1	18	24	18 to 24	D	Lead	69.3		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q2	2	6	2 to 6	A	Lead	447		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q2	0	2	0 to 2	AA	Lead	284		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q2	6	12	6 to 12	B	Lead	1400		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q2	12	18	12 to 18	C	Lead	473		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P030	n/a	Q2	18	24	18 to 24	D	Lead	310		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0544	P030	S0068	Q2	18	24	18 to 24	D	Lead	9.9		Final	2018 November ERT Soil Sampling Week 1	43.1820867	-78.687582	11/15/2018	8:10
ERT-0545	P030	S0068	Q2	24	30	24 to 30	E	Lead	36		Final	2018 November ERT Soil Sampling Week 1	43.1820867	-78.687582	11/15/2018	8:10
ERT-0552	P030	S0069	Q2	18	24	18 to 24	D	Lead	360		Final	2018 November ERT Soil Sampling Week 1	43.1821678	-78.687627	11/15/2018	8:30
ERT-0553	P030	S0069	Q2	24	30	24 to 30	E	Lead	9.7		Final	2018 November ERT Soil Sampling Week 1	43.1821678	-78.687627	11/15/2018	8:30
ERT-0560	P030	S0070	Q2	18	24	18 to 24	D	Lead	58		Final	2018 November ERT Soil Sampling Week 1	43.1822528	-78.687669	11/15/2018	8:45
ERT-0561	P030	S0070	Q2	24	30	24 to 30	E	Lead	25		Final	2018 November ERT Soil Sampling Week 1	43.1822528	-78.687669	11/15/2018	8:45
ERT-0562	P030	S0070	Q2	30	36	30 to 36	F	Lead	9.9		Final	2018 November ERT Soil Sampling Week 1	43.1822528	-78.687669	11/15/2018	8:45
ERT-0568	P030	S0071	Q2	18	24	18 to 24	D	Lead	51		Final	2018 November ERT Soil Sampling Week 1	43.1821407	-78.687748	11/15/2018	9:00
ERT-0569	P030	S0071	Q2	24	30	24 to 30	E	Lead	3.9		Final	2018 November ERT Soil Sampling Week 1	43.1821407	-78.687748	11/15/2018	9:00

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-0571	P030	S0071	Q2	36	42	36 to 42	G	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1821407	-78.687748	11/15/2018	9:00
ERT-0576	P030	S0072	Q2	18	24	18 to 24	D	Lead	23		Final	2018 November ERT Soil Sampling Week 1	43.1821249	-78.687791	11/15/2018	9:15
ERT-0577	P030	S0072	Q2	24	30	24 to 30	E	Lead	12		Final	2018 November ERT Soil Sampling Week 1	43.1821249	-78.687791	11/15/2018	9:15
ERT-0584	P030	S0073	Q2	18	24	18 to 24	D	Lead	290		Final	2018 November ERT Soil Sampling Week 1	43.1820495	-78.687744	11/15/2018	9:30
ERT-0585	P030	S0073	Q2	24	30	24 to 30	E	Lead	95		Final	2018 November ERT Soil Sampling Week 1	43.1820495	-78.687744	11/15/2018	9:30
ERT-0585D	P030	S0073	Q2	24	30	24 to 30	E	Lead	85		Final	2018 November ERT Soil Sampling Week 1	43.1820495	-78.687744	11/15/2018	9:30
ERT-0588	P030	S0073	Q2	42	48	42 to 48	H	Lead	10		Final	2018 November ERT Soil Sampling Week 1	43.1820495	-78.687744	11/15/2018	9:30
ERT-0592	P030	S0074	Q2	18	24	18 to 24	D	Lead	240		Final	2018 November ERT Soil Sampling Week 1	43.1820389	-78.687713	11/15/2018	9:45
ERT-0593	P030	S0074	Q2	24	30	24 to 30	E	Lead	43		Final	2018 November ERT Soil Sampling Week 1	43.1820389	-78.687713	11/15/2018	9:45
ERT-3006	P030	SW366	Q2	0	6	0 to 6	A	Lead	150		Final	2019 June Delineation Sampling	43.1820456	-78.687722	6/11/2019	16:14
ERT-3007	P030	SW366	Q2	6	12	6 to 12	B	Lead	260		Final	2019 June Delineation Sampling	43.1820456	-78.687722	6/11/2019	16:14
ERT-3010	P030	SW366	Q2	24	30	24 to 30	E	Lead	8.8	U	Final	2019 June Delineation Sampling	43.1820456	-78.687722	6/11/2019	16:14
ERT-3012	P030	SW367	Q2	0	6	0 to 6	A	Lead	150		Final	2019 June Delineation Sampling	43.1820736	-78.687536	6/11/2019	16:21
ERT-3013	P030	SW367	Q2	6	12	6 to 12	B	Lead	52		Final	2019 June Delineation Sampling	43.1820736	-78.687536	6/11/2019	16:21
ERT-3016	P030	SW367	Q2	24	30	24 to 30	E	Lead	7.3	U	Final	2019 June Delineation Sampling	43.1820736	-78.687536	6/11/2019	16:21
RI Data	P031	n/a	Q1	2	6	2 to 6	A	Lead	629		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q1	2	6	2 to 6	A	Lead	478		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q1	0	2	0 to 2	AA	Lead	470		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q1	6	12	6 to 12	B	Lead	883		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q1	12	18	12 to 18	C	Lead	485		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q1	18	24	18 to 24	D	Lead	278		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0616	P031	S0077	Q1	18	24	18 to 24	D	Lead	46		Final	2018 November ERT Soil Sampling Week 1	43.1819258	-78.687975	11/15/2018	10:30
ERT-0617	P031	S0077	Q1	24	30	24 to 30	E	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1819258	-78.687975	11/15/2018	10:30
ERT-0624	P031	S0078	Q1	18	24	18 to 24	D	Lead	80		Final	2018 November ERT Soil Sampling Week 1	43.1818643	-78.687927	11/15/2018	10:45
ERT-0625	P031	S0078	Q1	24	30	24 to 30	E	Lead	23		Final	2018 November ERT Soil Sampling Week 1	43.1818643	-78.687927	11/15/2018	10:45
ERT-0648	P031	S0081	Q1	18	24	18 to 24	D	Lead	38		Final	2018 November ERT Soil Sampling Week 1	43.1819779	-78.687807	11/15/2018	11:30
ERT-0649	P031	S0081	Q1	24	30	24 to 30	E	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1819779	-78.687807	11/15/2018	11:30
ERT-0656	P031	S0082	Q1	18	24	18 to 24	D	Lead	47		Final	2018 November ERT Soil Sampling Week 1	43.181891	-78.687774	11/15/2018	12:45
ERT-0657	P031	S0082	Q1	24	30	24 to 30	E	Lead	29		Final	2018 November ERT Soil Sampling Week 1	43.181891	-78.687774	11/15/2018	12:45
ERT-0664	P031	S0083	Q1	18	24	18 to 24	D	Lead	43		Final	2018 November ERT Soil Sampling Week 1	43.1819006	-78.687714	11/15/2018	13:00
ERT-0665	P031	S0083	Q1	24	30	24 to 30	E	Lead	13		Final	2018 November ERT Soil Sampling Week 1	43.1819006	-78.687714	11/15/2018	13:00
ERT-0672	P031	S0084	Q1	18	24	18 to 24	D	Lead	93		Final	2018 November ERT Soil Sampling Week 1	43.1818301	-78.6877	11/15/2018	13:15
ERT-0673	P031	S0084	Q1	24	30	24 to 30	E	Lead	72		Final	2018 November ERT Soil Sampling Week 1	43.1818301	-78.6877	11/15/2018	13:15
ERT-0680	P031	S0085	Q1	18	24	18 to 24	D	Lead	49		Final	2018 November ERT Soil Sampling Week 1	43.181814	-78.687749	11/15/2018	13:25
ERT-0681	P031	S0085	Q1	24	30	24 to 30	E	Lead	60		Final	2018 November ERT Soil Sampling Week 1	43.181814	-78.687749	11/15/2018	13:25
ERT-0688	P031	S0086	Q1	18	24	18 to 24	D	Lead	72		Final	2018 November ERT Soil Sampling Week 1	43.1817879	-78.687856	11/15/2018	13:45
ERT-0689	P031	S0086	Q1	24	30	24 to 30	E	Lead	84		Final	2018 November ERT Soil Sampling Week 1	43.1817879	-78.687856	11/15/2018	13:45
ERT-0696	P031	S0087	Q1	18	24	18 to 24	D	Lead	68		Final	2018 November ERT Soil Sampling Week 1	43.1818268	-78.687862	11/15/2018	14:00
ERT-0697	P031	S0087	Q1	24	30	24 to 30	E	Lead	45		Final	2018 November ERT Soil Sampling Week 1	43.1818268	-78.687862	11/15/2018	14:00
ERT-2996	P031	SW364	Q1	0	6	0 to 6	A	Lead	380		Final	2019 June Delineation Sampling	43.1818924	-78.687702	6/11/2019	16:00
ERT-2997	P031	SW364	Q1	6	12	6 to 12	B	Lead	100		Final	2019 June Delineation Sampling	43.1818924	-78.687702	6/11/2019	16:00
ERT-3001	P031	SW365	Q1	0	6	0 to 6	A	Lead	310		Final	2019 June Delineation Sampling	43.1819731	-78.687733	6/11/2019	16:06
ERT-3002	P031	SW365	Q1	6	12	6 to 12	B	Lead	210		Final	2019 June Delineation Sampling	43.1819731	-78.687733	6/11/2019	16:06
RI Data	P031	n/a	Q2	2	6	2 to 6	A	Lead	331		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q2	0	2	0 to 2	AA	Lead	348		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q2	6	12	6 to 12	B	Lead	328		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P031	n/a	Q2	12	18	12 to 18	C	Lead	342		n/a	Weston Composite Risk Sampling	n/a	n/a	2018	n/a
RI Data	P031	n/a	Q2	18	24	18 to 24	D	Lead	195		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0599	P031	S0075	Q2	12	18	12 to 18	C	Lead	350		Final	2018 November ERT Soil Sampling Week 1	43.1821218	-78.688011	11/15/2018	10:00
ERT-0600	P031	S0075	Q2	18	24	18 to 24	D	Lead	84		Final	2018 November ERT Soil Sampling Week 1	43.1821218	-78.688011	11/15/2018	10:00
ERT-0601	P031	S0075	Q2	24	30	24 to 30	E	Lead	22		Final	2018 November ERT Soil Sampling Week 1	43.1821218	-78.688011	11/15/2018	10:00
ERT-0607	P031	S0076	Q2	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 1	43.1820313	-78.687949	11/15/2018	10:15
ERT-0608	P031	S0076	Q2	18	24	18 to 24	D	Lead	21		Final	2018 November ERT Soil Sampling Week 1	43.1820313	-78.687949	11/15/2018	10:15
ERT-0632	P031	S0079	Q2	18	24	18 to 24	D	Lead	37		Final	2018 November ERT Soil Sampling Week 1	43.1821401	-78.687877	11/15/2018	11:00
ERT-0633	P031	S0079	Q2	24	30	24 to 30	E	Lead	14		Final	2018 November ERT Soil Sampling Week 1	43.1821401	-78.687877	11/15/2018	11:00

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-0640	P031	S0080	Q2	18	24	18 to 24	D	Lead	10		Final	2018 November ERT Soil Sampling Week 1	43.1820679	-78.687827	11/15/2018	11:15
ERT-0641	P031	S0080	Q2	24	30	24 to 30	E	Lead	42		Final	2018 November ERT Soil Sampling Week 1	43.1820679	-78.687827	11/15/2018	11:15
RI Data	P032	n/a	Q1	2	6	2 to 6	A	Lead	572		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q1	0	2	0 to 2	AA	Lead	367		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q1	6	12	6 to 12	B	Lead	334		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q1	12	18	12 to 18	C	Lead	149		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q1	12	18	12 to 18	C	Lead	130		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q1	18	24	18 to 24	D	Lead	112		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1190	P032	S0149	Q1	6	12	6 to 12	B	Lead	230		Final	2018 November ERT Soil Sampling Week 2	43.1818586	-78.687982	11/27/2018	10:05
ERT-1191	P032	S0149	Q1	12	18	12 to 18	C	Lead	79		Final	2018 November ERT Soil Sampling Week 2	43.1818586	-78.687982	11/27/2018	10:05
ERT-1198	P032	S0150	Q1	6	12	6 to 12	B	Lead	180		Final	2018 November ERT Soil Sampling Week 2	43.1817954	-78.687919	11/27/2018	10:20
ERT-1199	P032	S0150	Q1	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 2	43.1817954	-78.687919	11/27/2018	10:20
ERT-1206	P032	S0151	Q1	6	12	6 to 12	B	Lead	190		Final	2018 November ERT Soil Sampling Week 2	43.1817393	-78.688008	11/27/2018	10:30
ERT-1207	P032	S0151	Q1	12	18	12 to 18	C	Lead	140		Final	2018 November ERT Soil Sampling Week 2	43.1817393	-78.688008	11/27/2018	10:30
ERT-1214	P032	S0152	Q1	6	12	6 to 12	B	Lead	410		Final	2018 November ERT Soil Sampling Week 2	43.1817472	-78.688078	11/27/2018	10:45
ERT-1215	P032	S0152	Q1	12	18	12 to 18	C	Lead	36		Final	2018 November ERT Soil Sampling Week 2	43.1817472	-78.688078	11/27/2018	10:45
ERT-1222	P032	S0153	Q1	6	12	6 to 12	B	Lead	230		Final	2018 November ERT Soil Sampling Week 2	43.1818043	-78.688104	11/27/2018	11:00
ERT-1223	P032	S0153	Q1	12	18	12 to 18	C	Lead	280		Final	2018 November ERT Soil Sampling Week 2	43.1818043	-78.688104	11/27/2018	11:00
ERT-1224	P032	S0153	Q1	18	24	18 to 24	D	Lead	160		Final	2018 November ERT Soil Sampling Week 2	43.1818043	-78.688104	11/27/2018	11:00
ERT-1225	P032	S0153	Q1	24	30	24 to 30	E	Lead	56		Final	2018 November ERT Soil Sampling Week 2	43.1818043	-78.688104	11/27/2018	11:00
RI Data	P033	n/a	Q2	2	6	2 to 6	A	Lead	705		n/a	Weston Composite Risk Sampling	n/a	n/a	2018	n/a
RI Data	P032	n/a	Q2	0	2	0 to 2	AA	Lead	608		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q2	6	12	6 to 12	B	Lead	583		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q2	12	18	12 to 18	C	Lead	299		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P032	n/a	Q2	18	24	18 to 24	D	Lead	227		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1119	P032	S0140	Q2	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 2	43.1820524	-78.688229	11/27/2018	8:25
ERT-1120	P032	S0140	Q2	18	24	18 to 24	D	Lead	160		Final	2018 November ERT Soil Sampling Week 2	43.1820524	-78.688229	11/27/2018	8:25
ERT-1127	P032	S0141	Q2	12	18	12 to 18	C	Lead	210	J	Final	2018 November ERT Soil Sampling Week 2	43.1820682	-78.688124	11/27/2018	8:35
ERT-1128	P032	S0141	Q2	18	24	18 to 24	D	Lead	74		Final	2018 November ERT Soil Sampling Week 2	43.1820682	-78.688124	11/27/2018	8:35
ERT-1135	P032	S0142	Q2	12	18	12 to 18	C	Lead	270		Final	2018 November ERT Soil Sampling Week 2	43.1820762	-78.688074	11/27/2018	8:45
ERT-1136	P032	S0142	Q2	18	24	18 to 24	D	Lead	69		Final	2018 November ERT Soil Sampling Week 2	43.1820762	-78.688074	11/27/2018	8:45
ERT-1143	P032	S0143	Q2	12	18	12 to 18	C	Lead	98		Final	2018 November ERT Soil Sampling Week 2	43.1820092	-78.68806	11/27/2018	8:55
ERT-1143D	P032	S0143	Q2	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 2	43.1820092	-78.68806	11/27/2018	8:55
ERT-1144	P032	S0143	Q2	18	24	18 to 24	D	Lead	65		Final	2018 November ERT Soil Sampling Week 2	43.1820092	-78.68806	11/27/2018	8:55
ERT-1151	P032	S0144	Q2	12	18	12 to 18	C	Lead	190		Final	2018 November ERT Soil Sampling Week 2	43.1820099	-78.688094	11/27/2018	9:20
ERT-1152	P032	S0144	Q2	18	24	18 to 24	D	Lead	30		Final	2018 November ERT Soil Sampling Week 2	43.1820099	-78.688094	11/27/2018	9:20
ERT-1159	P032	S0145	Q2	12	18	12 to 18	C	Lead	22		Final	2018 November ERT Soil Sampling Week 2	43.1819717	-78.688189	11/27/2018	9:30
ERT-1160	P032	S0145	Q2	18	24	18 to 24	D	Lead	7.5	U	Final	2018 November ERT Soil Sampling Week 2	43.1819717	-78.688189	11/27/2018	9:30
ERT-1167	P032	S0146	Q2	12	18	12 to 18	C	Lead	950		Final	2018 November ERT Soil Sampling Week 2	43.1818969	-78.688152	11/27/2018	9:40
ERT-1168	P032	S0146	Q2	18	24	18 to 24	D	Lead	61		Final	2018 November ERT Soil Sampling Week 2	43.1818969	-78.688152	11/27/2018	9:40
ERT-1175	P032	S0147	Q2	12	18	12 to 18	C	Lead	570		Final	2018 November ERT Soil Sampling Week 2	43.1819455	-78.688044	11/27/2018	9:55
ERT-1176	P032	S0147	Q2	18	24	18 to 24	D	Lead	73		Final	2018 November ERT Soil Sampling Week 2	43.1819455	-78.688044	11/27/2018	9:55
ERT-1183	P032	S0148	Q2	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 2	43.181942	-78.687998	11/27/2018	10:00
ERT-1184	P032	S0148	Q2	18	24	18 to 24	D	Lead	17		Final	2018 November ERT Soil Sampling Week 2	43.181942	-78.687998	11/27/2018	10:00
RI Data	P033	n/a	Q1	2	6	2 to 6	A	Lead	275		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q1	0	2	0 to 2	AA	Lead	268		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q1	6	12	6 to 12	B	Lead	142		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q1	12	18	12 to 18	C	Lead	112		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q1	18	24	18 to 24	D	Lead	94.4		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q2	2	6	2 to 6	A	Lead	383		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q2	0	2	0 to 2	AA	Lead	345		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q2	6	12	6 to 12	B	Lead	359		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q2	12	18	12 to 18	C	Lead	165		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q2	18	24	18 to 24	D	Lead	101		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q3	2	6	2 to 6	A	Lead	197		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P033	n/a	Q3	0	2	0 to 2	AA	Lead	172		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q3	6	12	6 to 12	B	Lead	186		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q3	6	12	6 to 12	B	Lead	137		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q3	12	18	12 to 18	C	Lead	51.8		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q3	18	24	18 to 24	D	Lead	57		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q4	2	6	2 to 6	A	Lead	120		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q4	0	2	0 to 2	AA	Lead	114		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q4	6	12	6 to 12	B	Lead	63.3		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q4	12	18	12 to 18	C	Lead	59.9		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q4	18	24	18 to 24	D	Lead	43.6		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q5	2	6	2 to 6	A	Lead	390		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q5	0	2	0 to 2	AA	Lead	457		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q5	6	12	6 to 12	B	Lead	220		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q5	12	18	12 to 18	C	Lead	120		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q5	18	24	18 to 24	D	Lead	71.6		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-2413	P033	S0293	Q5	0	6	0 to 6	A	Lead	400		Final	2019 April ERT Soil Sampling Week 1	43.1811112	-78.687618	4/25/2019	8:11
ERT-2421	P033	S0293	Q5	0	6	0 to 6	A	Lead	390		Final	2019 April ERT Soil Sampling Week 1	43.1811112	-78.687618	4/25/2019	8:11
ERT-2414	P033	S0293	Q5	6	12	6 to 12	B	Lead	210		Final	2019 April ERT Soil Sampling Week 1	43.1811112	-78.687618	4/25/2019	8:11
ERT-2422	P033	S0293	Q5	6	12	6 to 12	B	Lead	230		Final	2019 April ERT Soil Sampling Week 1	43.1811112	-78.687618	4/25/2019	8:11
ERT-2415	P033	S0293	Q5	12	18	12 to 18	C	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1811112	-78.687618	4/25/2019	8:11
ERT-2416	P033	S0293	Q5	18	24	18 to 24	D	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1811112	-78.687618	4/25/2019	8:11
ERT-2405	P033	S0294	Q5	0	6	0 to 6	A	Lead	370		Final	2019 April ERT Soil Sampling Week 1	43.1811799	-78.687654	4/25/2019	8:04
ERT-2406	P033	S0294	Q5	6	12	6 to 12	B	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1811799	-78.687654	4/25/2019	8:04
ERT-2396	P033	S0295	Q5	0	6	0 to 6	A	Lead	250		Final	2019 April ERT Soil Sampling Week 1	43.1812346	-78.68766	4/25/2019	7:57
ERT-2404	P033	S0295	Q5	0	6	0 to 6	A	Lead	240		Final	2019 April ERT Soil Sampling Week 1	43.1812346	-78.68766	4/25/2019	7:57
ERT-2397	P033	S0295	Q5	6	12	6 to 12	B	Lead	89		Final	2019 April ERT Soil Sampling Week 1	43.1812346	-78.68766	4/25/2019	7:57
ERT-2387	P033	S0296	Q5	0	6	0 to 6	A	Lead	430		Final	2019 April ERT Soil Sampling Week 1	43.1812284	-78.68776	4/25/2019	7:49
ERT-2395	P033	S0296	Q5	0	6	0 to 6	A	Lead	400		Final	2019 April ERT Soil Sampling Week 1	43.1812284	-78.68776	4/25/2019	7:49
ERT-2388	P033	S0296	Q5	6	12	6 to 12	B	Lead	78		Final	2019 April ERT Soil Sampling Week 1	43.1812284	-78.68776	4/25/2019	7:49
ERT-2379	P033	S0297	Q5	0	6	0 to 6	A	Lead	1100		Final	2019 April ERT Soil Sampling Week 1	43.18117	-78.687856	4/25/2019	7:40
ERT-2380	P033	S0297	Q5	6	12	6 to 12	B	Lead	530		Final	2019 April ERT Soil Sampling Week 1	43.18117	-78.687856	4/25/2019	7:40
ERT-2381	P033	S0297	Q5	12	18	12 to 18	C	Lead	340		Final	2019 April ERT Soil Sampling Week 1	43.18117	-78.687856	4/25/2019	7:40
ERT-2382	P033	S0297	Q5	18	24	18 to 24	D	Lead	47		Final	2019 April ERT Soil Sampling Week 1	43.18117	-78.687856	4/25/2019	7:40
ERT-3194	P033	S0297	Q5	24	30	24 to 30	E	Lead	31		Final	2019 April ERT Soil Sampling Week 1	43.18117	-78.687856	4/25/2019	7:40
ERT-3195	P033	S0297	Q5	24	30	24 to 30	E	Lead	21		Final	2019 June Risk Sampling	43.18117	-78.687856	4/25/2019	7:40
ERT-2371	P033	S0298	Q5	0	6	0 to 6	A	Lead	410		Final	2019 April ERT Soil Sampling Week 1	43.1810679	-78.6878	4/25/2019	7:30
ERT-2372	P033	S0298	Q5	6	12	6 to 12	B	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1810679	-78.6878	4/25/2019	7:30
ERT-2423	P033	SW299	Q5	0	6	0 to 6	A	Lead	660		Final	2019 April ERT Soil Sampling Week 1	43.1810305	-78.687729	4/25/2019	8:20
ERT-2431	P033	SW300	Q5	0	6	0 to 6	A	Lead	300		Final	2019 April ERT Soil Sampling Week 1	43.1810728	-78.687624	4/25/2019	8:27
ERT-2439	P033	SW301	Q5	0	6	0 to 6	A	Lead	220		Final	2019 April ERT Soil Sampling Week 1	43.1811189	-78.687578	4/25/2019	8:33
ERT-2447	P033	SW302	Q5	0	6	0 to 6	A	Lead	240		Final	2019 April ERT Soil Sampling Week 1	43.1812437	-78.687612	4/25/2019	8:40
ERT-2455	P033	SW303	Q5	0	6	0 to 6	A	Lead	230		Final	2019 April ERT Soil Sampling Week 1	43.1812489	-78.687717	4/25/2019	8:55
ERT-2463	P033	SW304	Q5	0	6	0 to 6	A	Lead	390		Final	2019 April ERT Soil Sampling Week 1	43.1812249	-78.687817	4/25/2019	9:02
ERT-2471	P033	SW305	Q5	0	6	0 to 6	A	Lead	210		Final	2019 April ERT Soil Sampling Week 1	43.1811962	-78.687914	4/25/2019	9:09
RI Data	P033	n/a	Q6	2	6	2 to 6	A	Lead	206		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q6	0	2	0 to 2	AA	Lead	204		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q6	6	12	6 to 12	B	Lead	66.6		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q6	12	18	12 to 18	C	Lead	55.2		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q6	18	24	18 to 24	D	Lead	36.3		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q7	2	6	2 to 6	A	Lead	222		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q7	0	2	0 to 2	AA	Lead	222		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q7	6	12	6 to 12	B	Lead	115		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q7	12	18	12 to 18	C	Lead	64		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q7	18	24	18 to 24	D	Lead	41.5		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2487	P033	SW306	Q7	0	6	0 to 6	A	Lead	230		Final	2019 April ERT Soil Sampling Week 1	43.1812802	-78.68796	4/25/2019	9:35
ERT-2479	P033	SW307	Q7	0	6	0 to 6	A	Lead	400		Final	2019 April ERT Soil Sampling Week 1	43.1813576	-78.687986	4/25/2019	9:33
ERT-2496	P033	SW308	Q7	6	12	6 to 12	B	Lead	64		Final	2019 April ERT Soil Sampling Week 1	43.1814195	-78.687877	4/25/2019	9:40
ERT-2504	P033	SW309	Q7	6	12	6 to 12	B	Lead	130		Final	2019 April ERT Soil Sampling Week 1	43.1814464	-78.687754	4/25/2019	9:51
RI Data	P033	n/a	Q8	2	6	2 to 6	A	Lead	127		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q8	0	2	0 to 2	AA	Lead	198		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q8	0	2	0 to 2	AA	Lead	195		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q8	6	12	6 to 12	B	Lead	72.5		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q8	12	18	12 to 18	C	Lead	50.6		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P033	n/a	Q8	18	24	18 to 24	D	Lead	47.6		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-2512	P033	SW310	Q8	6	12	6 to 12	B	Lead	74		Final	2019 April ERT Soil Sampling Week 1	43.1814697	-78.687671	4/25/2019	10:00
ERT-2520	P033	SW311	Q8	6	12	6 to 12	B	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.181497	-78.687548	4/25/2019	10:09
ERT-2528	P033	SW312	Q8	6	12	6 to 12	B	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1815356	-78.687451	4/25/2019	10:18
RI Data	P034	n/a	Q1	2	6	2 to 6	A	Lead	233		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q1	0	2	0 to 2	AA	Lead	301		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q1	6	12	6 to 12	B	Lead	274		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q1	6	12	6 to 12	B	Lead	262		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q1	12	18	12 to 18	C	Lead	243		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q1	18	24	18 to 24	D	Lead	181		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q2	2	6	2 to 6	A	Lead	267		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q2	0	2	0 to 2	AA	Lead	154		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q2	6	12	6 to 12	B	Lead	433		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q2	12	18	12 to 18	C	Lead	455		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P034	n/a	Q2	18	24	18 to 24	D	Lead	426		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1057	P034	S0125	Q2	24	30	24 to 30	E	Lead	20		Final	2018 November ERT Soil Sampling Week 2	43.1822718	-78.68694	11/26/2018	14:05
ERT-1058	P034	S0125	Q2	30	36	30 to 36	F	Lead	15		Final	2018 November ERT Soil Sampling Week 2	43.1822718	-78.68694	11/26/2018	14:05
ERT-1065	P034	S0126	Q2	24	30	24 to 30	E	Lead	10		Final	2018 November ERT Soil Sampling Week 2	43.1822893	-78.687019	11/26/2018	14:20
ERT-1066	P034	S0126	Q2	30	36	30 to 36	F	Lead	8.1	U	Final	2018 November ERT Soil Sampling Week 2	43.1822893	-78.687019	11/26/2018	14:20
ERT-1073	P034	S0127	Q2	24	30	24 to 30	E	Lead	22		Final	2018 November ERT Soil Sampling Week 2	43.1823815	-78.687037	11/26/2018	14:40
ERT-1074	P034	S0127	Q2	30	36	30 to 36	F	Lead	22		Final	2018 November ERT Soil Sampling Week 2	43.1823815	-78.687037	11/26/2018	14:40
ERT-1081	P034	S0128	Q2	24	30	24 to 30	E	Lead	21		Final	2018 November ERT Soil Sampling Week 2	43.1824097	-78.686972	11/26/2018	14:55
ERT-1082	P034	S0128	Q2	30	36	30 to 36	F	Lead	10		Final	2018 November ERT Soil Sampling Week 2	43.1824097	-78.686972	11/26/2018	14:55
ERT-2910	P034	SW339	Q2	12	18	12 to 18	C	Lead	200		Final	2019 June Delineation Sampling	43.1824873	-78.686877	6/11/2019	11:22
ERT-2911	P034	SW339	Q2	18	24	18 to 24	D	Lead	22		Final	2019 June Delineation Sampling	43.1824873	-78.686877	6/11/2019	11:22
ERT-2914	P034	SW340	Q2	12	18	12 to 18	C	Lead	29		Final	2019 June Delineation Sampling	43.1824611	-78.686727	6/11/2019	11:37
ERT-2915	P034	SW340	Q2	18	24	18 to 24	D	Lead	48		Final	2019 June Delineation Sampling	43.1824611	-78.686727	6/11/2019	11:37
ERT-2928	P034	SW350	Q2	12	18	12 to 18	C	Lead	18		Final	2019 June Delineation Sampling	43.1823205	-78.686847	6/11/2019	13:17
ERT-2929	P034	SW350	Q2	18	24	18 to 24	D	Lead	40		Final	2019 June Delineation Sampling	43.1823205	-78.686847	6/11/2019	13:17
RI Data	P035	n/a	Q1	2	6	2 to 6	A	Lead	282		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q1	0	2	0 to 2	AA	Lead	268		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q1	6	12	6 to 12	B	Lead	351		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q1	12	18	12 to 18	C	Lead	201		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q1	18	24	18 to 24	D	Lead	225		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1047	P035	S0129	Q1	12	18	12 to 18	C	Lead	200		Final	2018 November ERT Soil Sampling Week 2	43.1825636	-78.686841	11/26/2018	13:55
ERT-1048	P035	S0129	Q1	18	24	18 to 24	D	Lead	57		Final	2018 November ERT Soil Sampling Week 2	43.1825636	-78.686841	11/26/2018	13:55
ERT-1031	P035	S0130	Q1	12	18	12 to 18	C	Lead	200		Final	2018 November ERT Soil Sampling Week 2	43.1824715	-78.686811	11/26/2018	13:35
ERT-1032	P035	S0130	Q1	18	24	18 to 24	D	Lead	130		Final	2018 November ERT Soil Sampling Week 2	43.1824715	-78.686811	11/26/2018	13:35
ERT-1039	P035	S0131	Q1	12	18	12 to 18	C	Lead	98		Final	2018 November ERT Soil Sampling Week 2	43.1825548	-78.686719	11/26/2018	13:45
ERT-1040	P035	S0131	Q1	18	24	18 to 24	D	Lead	26		Final	2018 November ERT Soil Sampling Week 2	43.1825548	-78.686719	11/26/2018	13:45
ERT-2916	P035	SW342	Q1	0	6	0 to 6	A	Lead	110		Final	2019 June Delineation Sampling	43.182631	-78.686725	6/11/2019	11:56
ERT-2917	P035	SW342	Q1	6	12	6 to 12	B	Lead	170		Final	2019 June Delineation Sampling	43.182631	-78.686725	6/11/2019	11:56
RI Data	P035	n/a	Q2	2	6	2 to 6	A	Lead	338		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q2	0	2	0 to 2	AA	Lead	226		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q2	6	12	6 to 12	B	Lead	385		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P035	n/a	Q2	12	18	12 to 18	C	Lead	395		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P035	n/a	Q2	18	24	18 to 24	D	Lead	256		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0999	P035	S0132	Q2	12	18	12 to 18	C	Lead	260		Final	2018 November ERT Soil Sampling Week 2	43.1824226	-78.68709	11/26/2018	11:55
ERT-1000	P035	S0132	Q2	18	24	18 to 24	D	Lead	660		Final	2018 November ERT Soil Sampling Week 2	43.1824226	-78.68709	11/26/2018	11:55
ERT-1001	P035	S0132	Q2	24	30	24 to 30	E	Lead	33		Final	2018 November ERT Soil Sampling Week 2	43.1824226	-78.68709	11/26/2018	11:55
ERT-1001D	P035	S0132	Q2	24	30	24 to 30	E	Lead	16		Final	2018 November ERT Soil Sampling Week 2	43.1824226	-78.68709	11/26/2018	11:55
ERT-1002	P035	S0132	Q2	30	36	30 to 36	F	Lead	11		Final	2018 November ERT Soil Sampling Week 2	43.1824226	-78.68709	11/26/2018	11:55
ERT-1007	P035	S0133	Q2	12	18	12 to 18	C	Lead	170		Final	2018 November ERT Soil Sampling Week 2	43.1824628	-78.687109	11/26/2018	12:10
ERT-1008	P035	S0133	Q2	18	24	18 to 24	D	Lead	44		Final	2018 November ERT Soil Sampling Week 2	43.1824628	-78.687109	11/26/2018	12:10
ERT-1015	P035	S0134	Q2	12	18	12 to 18	C	Lead	90		Final	2018 November ERT Soil Sampling Week 2	43.1825051	-78.687085	11/26/2018	12:20
ERT-1016	P035	S0134	Q2	18	24	18 to 24	D	Lead	50		Final	2018 November ERT Soil Sampling Week 2	43.1825051	-78.687085	11/26/2018	12:20
ERT-1023	P035	S0135	Q2	12	18	12 to 18	C	Lead	280		Final	2018 November ERT Soil Sampling Week 2	43.1824368	-78.687029	11/26/2018	12:25
ERT-1024	P035	S0135	Q2	18	24	18 to 24	D	Lead	2900		Final	2018 November ERT Soil Sampling Week 2	43.1824368	-78.687029	11/26/2018	12:25
ERT-1025	P035	S0135	Q2	24	30	24 to 30	E	Lead	84		Final	2018 November ERT Soil Sampling Week 2	43.1824368	-78.687029	11/26/2018	12:25
ERT-1026	P035	S0135	Q2	30	36	30 to 36	F	Lead	11		Final	2018 November ERT Soil Sampling Week 2	43.1824368	-78.687029	11/26/2018	12:25
ERT-2921	P035	SW341	Q2	0	6	0 to 6	A	Lead	170		Final	2019 June Delineation Sampling	43.1825643	-78.686808	6/11/2019	11:48
ERT-2922	P035	SW341	Q2	6	12	6 to 12	B	Lead	150		Final	2019 June Delineation Sampling	43.1825643	-78.686808	6/11/2019	11:48
RI Data	P036	n/a	Q1	2	6	2 to 6	A	Lead	304		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q1	2	6	2 to 6	A	Lead	294		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q1	0	2	0 to 2	AA	Lead	315		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q1	6	12	6 to 12	B	Lead	338		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q1	12	18	12 to 18	C	Lead	331		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q1	18	24	18 to 24	D	Lead	307		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q2	2	6	2 to 6	A	Lead	410		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q2	0	2	0 to 2	AA	Lead	415		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q2	6	12	6 to 12	B	Lead	291		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q2	12	18	12 to 18	C	Lead	271		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P036	n/a	Q2	18	24	18 to 24	D	Lead	295		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0509	P036	S0064	Q2	6	12	6 to 12	B	Lead	370		Final	2018 November ERT Soil Sampling Week 1	43.1820668	-78.686851	11/14/2018	15:10
ERT-0510	P036	S0064	Q2	12	18	12 to 18	C	Lead	320		Final	2018 November ERT Soil Sampling Week 1	43.1820668	-78.686851	11/14/2018	15:10
ERT-0511	P036	S0064	Q2	18	24	18 to 24	D	Lead	71		Final	2018 November ERT Soil Sampling Week 1	43.1820668	-78.686851	11/14/2018	15:10
ERT-0517	P036	S0065	Q2	6	12	6 to 12	B	Lead	69		Final	2018 November ERT Soil Sampling Week 1	43.1820828	-78.686809	11/14/2018	15:20
ERT-0518	P036	S0065	Q2	12	18	12 to 18	C	Lead	220		Final	2018 November ERT Soil Sampling Week 1	43.1820828	-78.686809	11/14/2018	15:20
ERT-0519	P036	S0065	Q2	18	24	18 to 24	D	Lead	120		Final	2018 November ERT Soil Sampling Week 1	43.1820828	-78.686809	11/14/2018	15:20
ERT-0520	P036	S0065	Q2	24	30	24 to 30	E	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1820828	-78.686809	11/14/2018	15:20
ERT-0525	P036	S0066	Q2	6	12	6 to 12	B	Lead	160		Final	2018 November ERT Soil Sampling Week 1	43.1821773	-78.686851	11/14/2018	15:35
ERT-0526	P036	S0066	Q2	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1821773	-78.686851	11/14/2018	15:35
ERT-0529	P036	S0066	Q2	30	36	30 to 36	F	Lead	21		Final	2018 November ERT Soil Sampling Week 1	43.1821773	-78.686851	11/14/2018	15:35
ERT-0533	P036	S0067	Q2	6	12	6 to 12	B	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1822152	-78.686986	11/14/2018	15:50
ERT-0534	P036	S0067	Q2	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1822152	-78.686986	11/14/2018	15:50
ERT-0539	P036	S0067	Q2	42	48	42 to 48	H	Lead	3.6		Final	2018 November ERT Soil Sampling Week 1	43.1822152	-78.686986	11/14/2018	15:50
ERT-2836	P036	SW336	Q2	0	6	0 to 6	A	Lead	300		Final	2019 June Delineation Sampling	43.1821443	-78.686808	6/11/2019	8:46
ERT-2837	P036	SW336	Q2	6	12	6 to 12	B	Lead	310		Final	2019 June Delineation Sampling	43.1821443	-78.686808	6/11/2019	8:46
ERT-2868	P036	SW337	Q2	0	6	0 to 6	A	Lead	170		Final	2019 June Delineation Sampling	43.182182	-78.686814	6/11/2019	9:27
ERT-2869	P036	SW337	Q2	6	12	6 to 12	B	Lead	170		Final	2019 June Delineation Sampling	43.182182	-78.686814	6/11/2019	9:27
ERT-2872	P036	SW338	Q2	0	6	0 to 6	A	Lead	160		Final	2019 June Delineation Sampling	43.1818823	-78.68671	6/11/2019	9:28
ERT-2873	P036	SW338	Q2	6	12	6 to 12	B	Lead	52		Final	2019 June Delineation Sampling	43.1818823	-78.68671	6/11/2019	9:28
ERT-2874	P036	SW338	Q2	12	18	12 to 18	C	Lead	78		Final	2019 June Delineation Sampling	43.1818823	-78.68671	6/11/2019	9:28
RI Data	P037	n/a	Q1	2	6	2 to 6	A	Lead	502		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q1	0	2	0 to 2	AA	Lead	464		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q1	6	12	6 to 12	B	Lead	560		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q1	12	18	12 to 18	C	Lead	879		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q1	18	24	18 to 24	D	Lead	451		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1385	P037	S0173	Q1	24	30	24 to 30	E	Lead	99		Final	2019 April ERT Soil Sampling Week 1	43.1815158	-78.686489	4/22/2019	8:45
ERT-1386	P037	S0173	Q1	30	36	30 to 36	F	Lead	43		Final	2019 April ERT Soil Sampling Week 1	43.1815158	-78.686489	4/22/2019	8:45
ERT-1393	P037	S0174	Q1	24	30	24 to 30	E	Lead	70		Final	2019 April ERT Soil Sampling Week 1	43.1815818	-78.686563	4/22/2019	8:50

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-1394	P037	S0174	Q1	30	36	30 to 36	F	Lead	37		Final	2019 April ERT Soil Sampling Week 1	43.1815818	-78.686563	4/22/2019	8:50
ERT-1622	P037	S0177	Q1	24	30	24 to 30	E	Lead	94		Final	2019 April ERT Soil Sampling Week 1	43.181465	-78.686788	4/22/2019	15:30
ERT-1623	P037	S0177	Q1	30	36	30 to 36	F	Lead	16	J	Final	2019 April ERT Soil Sampling Week 1	43.181465	-78.686788	4/22/2019	15:30
ERT-1606	P037	S0178	Q1	24	30	24 to 30	E	Lead	5.1		Final	2019 April ERT Soil Sampling Week 1	43.1815314	-78.686716	4/22/2019	15:15
ERT-1607	P037	S0178	Q1	30	36	30 to 36	F	Lead	1.5		Final	2019 April ERT Soil Sampling Week 1	43.1815314	-78.686716	4/22/2019	15:15
ERT-1401	P037	S0179	Q1	24	30	24 to 30	E	Lead	40		Final	2019 April ERT Soil Sampling Week 1	43.1815825	-78.686645	4/22/2019	9:00
ERT-1402	P037	S0179	Q1	30	36	30 to 36	F	Lead	28		Final	2019 April ERT Soil Sampling Week 1	43.1815825	-78.686645	4/22/2019	9:00
RI Data	P037	n/a	Q2	2	6	2 to 6	A	Lead	152		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q2	0	2	0 to 2	AA	Lead	198		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q2	6	12	6 to 12	B	Lead	183		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q2	12	18	12 to 18	C	Lead	163		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q2	12	18	12 to 18	C	Lead	148		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q2	18	24	18 to 24	D	Lead	36.7		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1628	P037	SW175	Q2	12	18	12 to 18	C	Lead	52		Final	2019 April ERT Soil Sampling Week 1	43.1813392	-78.686747	4/22/2019	15:50
ERT-1612	P037	SW176	Q2	12	18	12 to 18	C	Lead	98		Final	2019 April ERT Soil Sampling Week 1	43.1814113	-78.686824	4/22/2019	15:35
RI Data	P037	n/a	Q3	2	6	2 to 6	A	Lead	184		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q3	0	2	0 to 2	AA	Lead	166		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q3	6	12	6 to 12	B	Lead	166		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q3	12	18	12 to 18	C	Lead	77.2		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P037	n/a	Q3	18	24	18 to 24	D	Lead	37.1		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q1	2	6	2 to 6	A	Lead	478		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q1	0	2	0 to 2	AA	Lead	552		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q1	6	12	6 to 12	B	Lead	547		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q1	12	18	12 to 18	C	Lead	279		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q1	18	24	18 to 24	D	Lead	435		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1409	P038	S0180	Q1	24	30	24 to 30	E	Lead	21		Final	2019 April ERT Soil Sampling Week 1	43.1816628	-78.686663	4/22/2019	9:35
ERT-1410	P038	S0180	Q1	30	36	30 to 36	F	Lead	16		Final	2019 April ERT Soil Sampling Week 1	43.1816628	-78.686663	4/22/2019	9:35
ERT-1417	P038	S0181	Q1	24	30	24 to 30	E	Lead	85		Final	2019 April ERT Soil Sampling Week 1	43.1817306	-78.686758	4/22/2019	9:30
ERT-1418	P038	S0181	Q1	30	36	30 to 36	F	Lead	2.5		Final	2019 April ERT Soil Sampling Week 1	43.1817306	-78.686758	4/22/2019	9:30
ERT-1425	P038	S0182	Q1	24	30	24 to 30	E	Lead	150		Final	2019 April ERT Soil Sampling Week 1	43.1816871	-78.686834	4/22/2019	9:55
ERT-1429	P038	S0182	Q1	24	30	24 to 30	E	Lead	150		Final	2019 April ERT Soil Sampling Week 1	43.1816871	-78.686834	4/22/2019	9:55
ERT-1426	P038	S0182	Q1	30	36	30 to 36	F	Lead	220		Final	2019 April ERT Soil Sampling Week 1	43.1816871	-78.686834	4/22/2019	9:55
ERT-1430	P038	S0182	Q1	30	36	30 to 36	F	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1816871	-78.686834	4/22/2019	9:55
RI Data	P038	n/a	Q2	2	6	2 to 6	A	Lead	747		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q2	0	2	0 to 2	AA	Lead	659		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q2	6	12	6 to 12	B	Lead	805		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q2	12	18	12 to 18	C	Lead	1450		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q2	18	24	18 to 24	D	Lead	147		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1434	P038	S0193	Q2	18	24	18 to 24	D	Lead	72		Final	2019 April ERT Soil Sampling Week 1	43.1816367	-78.686914	4/22/2019	10:05
ERT-1435	P038	S0193	Q2	24	30	24 to 30	E	Lead	57		Final	2019 April ERT Soil Sampling Week 1	43.1816367	-78.686914	4/22/2019	10:05
ERT-1442	P038	S0194	Q2	18	24	18 to 24	D	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.1815844	-78.686966	4/22/2019	10:20
ERT-1443	P038	S0194	Q2	24	30	24 to 30	E	Lead	8.7		Final	2019 April ERT Soil Sampling Week 1	43.1815844	-78.686966	4/22/2019	10:20
ERT-1458	P038	S0195	Q2	18	24	18 to 24	D	Lead	63		Final	2019 April ERT Soil Sampling Week 1	43.1815303	-78.687023	4/22/2019	10:45
ERT-1459	P038	S0195	Q2	24	30	24 to 30	E	Lead	47		Final	2019 April ERT Soil Sampling Week 1	43.1815303	-78.687023	4/22/2019	10:45
ERT-1579	P038	S0202	Q2	18	24	18 to 24	D	Lead	27		Final	2019 April ERT Soil Sampling Week 1	43.1814602	-78.686953	4/22/2019	14:50
ERT-1580	P038	S0202	Q2	24	30	24 to 30	E	Lead	17		Final	2019 April ERT Soil Sampling Week 1	43.1814602	-78.686953	4/22/2019	14:50
ERT-1595	P038	S0203	Q2	18	24	18 to 24	D	Lead	37		Final	2019 April ERT Soil Sampling Week 1	43.1815097	-78.686881	4/22/2019	15:05
ERT-1600	P038	S0203	Q2	18	24	18 to 24	D	Lead	80		Final	2019 April ERT Soil Sampling Week 1	43.1815097	-78.686881	4/22/2019	15:05
ERT-1596	P038	S0203	Q2	24	30	24 to 30	E	Lead	3.5		Final	2019 April ERT Soil Sampling Week 1	43.1815097	-78.686881	4/22/2019	15:05
ERT-1601	P038	S0203	Q2	24	30	24 to 30	E	Lead	3.4		Final	2019 April ERT Soil Sampling Week 1	43.1815097	-78.686881	4/22/2019	15:05
ERT-1586	P038	SW183	Q2	12	18	12 to 18	C	Lead	480		Final	2019 April ERT Soil Sampling Week 1	43.1814855	-78.686889	4/22/2019	15:00
ERT-1570	P038	SW184	Q2	12	18	12 to 18	C	Lead	330		Final	2019 April ERT Soil Sampling Week 1	43.1814037	-78.68693	4/22/2019	14:40
ERT-1473	P038	SW191	Q2	12	18	12 to 18	C	Lead	110		Final	2019 April ERT Soil Sampling Week 1	43.181514	-78.687094	4/22/2019	11:00
ERT-1449	P038	SW192	Q2	12	18	12 to 18	C	Lead	170		Final	2019 April ERT Soil Sampling Week 1	43.1815936	-78.687008	4/22/2019	10:35
RI Data	P038	n/a	Q3	2	6	2 to 6	A	Lead	885		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P038	n/a	Q3	0	2	0 to 2	AA	Lead	942		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q3	6	12	6 to 12	B	Lead	557		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q3	12	18	12 to 18	C	Lead	311		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q3	18	24	18 to 24	D	Lead	174		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P038	n/a	Q3	18	24	18 to 24	D	Lead	169		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1481	P038	S0196	Q3	12	18	12 to 18	C	Lead	100		Final	2019 April ERT Soil Sampling Week 1	43.1814538	-78.687131	4/22/2019	11:45
ERT-1482	P038	S0196	Q3	18	24	18 to 24	D	Lead	150		Final	2019 April ERT Soil Sampling Week 1	43.1814538	-78.687131	4/22/2019	11:45
ERT-1489	P038	S0197	Q3	12	18	12 to 18	C	Lead	64		Final	2019 April ERT Soil Sampling Week 1	43.1813943	-78.687203	4/22/2019	11:45
ERT-1490	P038	S0197	Q3	18	24	18 to 24	D	Lead	48		Final	2019 April ERT Soil Sampling Week 1	43.1813943	-78.687203	4/22/2019	11:45
ERT-1506	P038	S0198	Q3	12	18	12 to 18	C	Lead	58		Final	2019 April ERT Soil Sampling Week 1	43.1813843	-78.687281	4/22/2019	13:10
ERT-1507	P038	S0198	Q3	18	24	18 to 24	D	Lead	35		Final	2019 April ERT Soil Sampling Week 1	43.1813843	-78.687281	4/22/2019	13:10
ERT-1530	P038	S0199	Q3	12	18	12 to 18	C	Lead	120		Final	2019 April ERT Soil Sampling Week 1	43.181276	-78.687216	4/22/2019	13:40
ERT-1531	P038	S0199	Q3	18	24	18 to 24	D	Lead	130		Final	2019 April ERT Soil Sampling Week 1	43.181276	-78.687216	4/22/2019	13:40
ERT-1546	P038	S0200	Q3	12	18	12 to 18	C	Lead	440		Final	2019 April ERT Soil Sampling Week 1	43.1813669	-78.687174	4/22/2019	14:10
ERT-1547	P038	S0200	Q3	18	24	18 to 24	D	Lead	34		Final	2019 April ERT Soil Sampling Week 1	43.1813669	-78.687174	4/22/2019	14:10
ERT-1562	P038	S0201	Q3	12	18	12 to 18	C	Lead	67		Final	2019 April ERT Soil Sampling Week 1	43.1814061	-78.687045	4/22/2019	14:25
ERT-1563	P038	S0201	Q3	18	24	18 to 24	D	Lead	9		Final	2019 April ERT Soil Sampling Week 1	43.1814061	-78.687045	4/22/2019	14:25
ERT-1552	P038	SW185	Q3	0	6	0 to 6	A	Lead	760		Final	2019 April ERT Soil Sampling Week 1	43.1813579	-78.687035	4/22/2019	14:15
ERT-1536	P038	SW186	Q3	0	6	0 to 6	A	Lead	830		Final	2019 April ERT Soil Sampling Week 1	43.1812861	-78.687135	4/22/2019	14:00
ERT-1520	P038	SW187	Q3	0	6	0 to 6	A	Lead	210		Final	2019 April ERT Soil Sampling Week 1	43.1812464	-78.687278	4/22/2019	13:25
ERT-1512	P038	SW188	Q3	0	6	0 to 6	A	Lead	270		Final	2019 April ERT Soil Sampling Week 1	43.1813395	-78.687315	4/22/2019	13:20
ERT-1495	P038	SW189	Q3	0	6	0 to 6	A	Lead	1800		Final	2019 April ERT Soil Sampling Week 1	43.1814019	-78.687271	4/22/2019	11:55
ERT-1463	P038	SW190	Q3	0	6	0 to 6	A	Lead	470		Final	2019 April ERT Soil Sampling Week 1	43.1814817	-78.687158	4/22/2019	11:35
RI Data	P039	n/a	Q1	2	6	2 to 6	A	Lead	305		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q1	0	2	0 to 2	AA	Lead	297		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q1	6	12	6 to 12	B	Lead	505		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q1	12	18	12 to 18	C	Lead	373		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q1	18	24	18 to 24	D	Lead	114		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1636	P039	S0204	Q1	12	18	12 to 18	C	Lead	64		Final	2019 April ERT Soil Sampling Week 1	43.1817708	-78.686816	4/22/2019	16:15
ERT-1637	P039	S0204	Q1	18	24	18 to 24	D	Lead	30		Final	2019 April ERT Soil Sampling Week 1	43.1817708	-78.686816	4/22/2019	16:15
ERT-1644	P039	S0205	Q1	12	18	12 to 18	C	Lead	22		Final	2019 April ERT Soil Sampling Week 1	43.1818002	-78.686886	4/22/2019	16:25
ERT-1645	P039	S0205	Q1	18	24	18 to 24	D	Lead	26		Final	2019 April ERT Soil Sampling Week 1	43.1818002	-78.686886	4/22/2019	16:25
ERT-1700	P039	SW212	Q1	12	18	12 to 18	C	Lead	37		Final	2019 April ERT Soil Sampling Week 1	43.1818407	-78.686903	4/22/2019	17:25
RI Data	P039	n/a	Q2	2	6	2 to 6	A	Lead	305		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q2	0	2	0 to 2	AA	Lead	297		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q2	6	12	6 to 12	B	Lead	492		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q2	12	18	12 to 18	C	Lead	816		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P039	n/a	Q2	18	24	18 to 24	D	Lead	342		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1661	P039	S0206	Q2	18	24	18 to 24	D	Lead	970		Final	2019 April ERT Soil Sampling Week 1	43.1817089	-78.687014	4/22/2019	16:40
ERT-1662	P039	S0206	Q2	24	30	24 to 30	E	Lead	1000		Final	2019 April ERT Soil Sampling Week 1	43.1817089	-78.687014	4/22/2019	16:40
ERT-1663	P039	S0206	Q2	30	36	30 to 36	F	Lead	240		Final	2019 April ERT Soil Sampling Week 1	43.1817089	-78.687014	4/22/2019	16:40
ERT-1664	P039	S0206	Q2	36	42	36 to 42	G	Lead	25		Final	2019 April ERT Soil Sampling Week 1	43.1817089	-78.687014	4/22/2019	16:40
ERT-1665	P039	S0206	Q2	42	48	42 to 48	H	Lead	79		Final	2019 April ERT Soil Sampling Week 1	43.1817089	-78.687014	4/22/2019	16:40
ERT-1653	P039	S0207	Q2	18	24	18 to 24	D	Lead	280		Final	2019 April ERT Soil Sampling Week 1	43.1817455	-78.686958	4/22/2019	16:30
ERT-1654	P039	S0207	Q2	24	30	24 to 30	E	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1817455	-78.686958	4/22/2019	16:30
ERT-1669	P039	S0208	Q2	18	24	18 to 24	D	Lead	170		Final	2019 April ERT Soil Sampling Week 1	43.1816678	-78.687044	4/22/2019	16:50
ERT-1670	P039	S0208	Q2	24	30	24 to 30	E	Lead	140		Final	2019 April ERT Soil Sampling Week 1	43.1816678	-78.687044	4/22/2019	16:50
ERT-1676	P039	SW209	Q2	12	18	12 to 18	C	Lead	600		Final	2019 April ERT Soil Sampling Week 1	43.1816713	-78.687057	4/22/2019	17:00
ERT-1684	P039	SW210	Q2	12	18	12 to 18	C	Lead	630		Final	2019 April ERT Soil Sampling Week 1	43.1817253	-78.687093	4/22/2019	17:05
ERT-1692	P039	SW211	Q2	12	18	12 to 18	C	Lead	1100		Final	2019 April ERT Soil Sampling Week 1	43.1817969	-78.686992	4/22/2019	17:15
RI Data	P040	n/a	Q1	2	6	2 to 6	A	Lead	364		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q1	0	2	0 to 2	AA	Lead	602		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q1	6	12	6 to 12	B	Lead	403		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q1	12	18	12 to 18	C	Lead	277		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q1	18	24	18 to 24	D	Lead	287		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-0414	P040	S0052	Q1	12	18	12 to 18	C	Lead	84		Final	2018 November ERT Soil Sampling Week 1	43.1821357	-78.687227	11/14/2018	10:35
ERT-0415	P040	S0052	Q1	18	24	18 to 24	D	Lead	8.3		Final	2018 November ERT Soil Sampling Week 1	43.1821357	-78.687227	11/14/2018	10:35
ERT-0422	P040	S0053	Q1	12	18	12 to 18	C	Lead	140		Final	2018 November ERT Soil Sampling Week 1	43.1820395	-78.687155	11/14/2018	10:50
ERT-0423	P040	S0053	Q1	18	24	18 to 24	D	Lead	7.3		Final	2018 November ERT Soil Sampling Week 1	43.1820395	-78.687155	11/14/2018	10:50
ERT-0430	P040	S0054	Q1	12	18	12 to 18	C	Lead	190		Final	2018 November ERT Soil Sampling Week 1	43.1819967	-78.687137	11/14/2018	11:05
ERT-0431	P040	S0054	Q1	18	24	18 to 24	D	Lead	35		Final	2018 November ERT Soil Sampling Week 1	43.1819967	-78.687137	11/14/2018	11:05
ERT-0478	P040	S0060	Q1	12	18	12 to 18	C	Lead	580		Final	2018 November ERT Soil Sampling Week 1	43.182188	-78.687035	11/14/2018	14:10
ERT-0479	P040	S0060	Q1	18	24	18 to 24	D	Lead	97		Final	2018 November ERT Soil Sampling Week 1	43.182188	-78.687035	11/14/2018	14:10
ERT-0486	P040	S0061	Q1	12	18	12 to 18	C	Lead	370		Final	2018 November ERT Soil Sampling Week 1	43.1821077	-78.686998	11/14/2018	14:20
ERT-0487	P040	S0061	Q1	18	24	18 to 24	D	Lead	180		Final	2018 November ERT Soil Sampling Week 1	43.1821077	-78.686998	11/14/2018	14:20
ERT-0490	P040	S0061	Q1	36	42	36 to 42	G	Lead	540		Final	2018 November ERT Soil Sampling Week 1	43.1821077	-78.686998	11/14/2018	14:20
ERT-0491	P040	S0061	Q1	42	48	42 to 48	H	Lead	120		Final	2018 November ERT Soil Sampling Week 1	43.1821077	-78.686998	11/14/2018	14:20
ERT-0494	P040	S0062	Q1	12	18	12 to 18	C	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1820508	-78.686968	11/14/2018	14:30
ERT-0495	P040	S0062	Q1	18	24	18 to 24	D	Lead	310		Final	2018 November ERT Soil Sampling Week 1	43.1820508	-78.686968	11/14/2018	14:30
ERT-0496	P040	S0062	Q1	24	30	24 to 30	E	Lead	84	J	Final	2018 November ERT Soil Sampling Week 1	43.1820508	-78.686968	11/14/2018	14:30
ERT-0497	P040	S0062	Q1	30	36	30 to 36	F	Lead	23	J	Final	2018 November ERT Soil Sampling Week 1	43.1820508	-78.686968	11/14/2018	14:30
ERT-0502	P040	S0063	Q1	12	18	12 to 18	C	Lead	420		Final	2018 November ERT Soil Sampling Week 1	43.1820334	-78.687041	11/14/2018	14:50
ERT-0503	P040	S0063	Q1	18	24	18 to 24	D	Lead	140		Final	2018 November ERT Soil Sampling Week 1	43.1820334	-78.687041	11/14/2018	14:50
ERT-0507	P040	S0063	Q1	42	48	42 to 48	H	Lead	160		Final	2018 November ERT Soil Sampling Week 1	43.1820334	-78.687041	11/14/2018	14:50
ERT-0507D	P040	S0063	Q1	42	48	42 to 48	H	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1820334	-78.687041	11/14/2018	14:50
RI Data	P040	n/a	Q2	2	6	2 to 6	A	Lead	874		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q2	0	2	0 to 2	AA	Lead	758		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q2	6	12	6 to 12	B	Lead	1610		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q2	6	12	6 to 12	B	Lead	1450		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q2	12	18	12 to 18	C	Lead	1370		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P040	n/a	Q2	18	24	18 to 24	D	Lead	856		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0397	P040	S0050	Q2	6	12	6 to 12	B	Lead	960		Final	2018 November ERT Soil Sampling Week 1	43.1822946	-78.687293	11/14/2018	10:10
ERT-0398	P040	S0050	Q2	12	18	12 to 18	C	Lead	240		Final	2018 November ERT Soil Sampling Week 1	43.1822946	-78.687293	11/14/2018	10:10
ERT-0398D	P040	S0050	Q2	12	18	12 to 18	C	Lead	160		Final	2018 November ERT Soil Sampling Week 1	43.1822946	-78.687293	11/14/2018	10:10
ERT-0399	P040	S0050	Q2	18	24	18 to 24	D	Lead	59		Final	2018 November ERT Soil Sampling Week 1	43.1822946	-78.687293	11/14/2018	10:10
ERT-0400	P040	S0050	Q2	24	30	24 to 30	E	Lead	11		Final	2018 November ERT Soil Sampling Week 1	43.1822946	-78.687293	11/14/2018	10:10
ERT-0401	P040	S0050	Q2	30	36	30 to 36	F	Lead	10		Final	2018 November ERT Soil Sampling Week 1	43.1822946	-78.687293	11/14/2018	10:10
ERT-0406	P040	S0051	Q2	12	18	12 to 18	C	Lead	14		Final	2018 November ERT Soil Sampling Week 1	43.1822136	-78.687264	11/14/2018	10:20
ERT-0407	P040	S0051	Q2	18	24	18 to 24	D	Lead	100		Final	2018 November ERT Soil Sampling Week 1	43.1822136	-78.687264	11/14/2018	10:20
ERT-0408	P040	S0051	Q2	24	30	24 to 30	E	Lead	36		Final	2018 November ERT Soil Sampling Week 1	43.1822136	-78.687264	11/14/2018	10:20
ERT-0409	P040	S0051	Q2	30	36	30 to 36	F	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1822136	-78.687264	11/14/2018	10:20
ERT-0440	P040	S0055	Q2	24	30	24 to 30	E	Lead	5		Final	2018 November ERT Soil Sampling Week 1	43.1823225	-78.687199	11/14/2018	11:45
ERT-0441	P040	S0055	Q2	30	36	30 to 36	F	Lead	12		Final	2018 November ERT Soil Sampling Week 1	43.1823225	-78.687199	11/14/2018	11:45
ERT-0448	P040	S0056	Q2	24	30	24 to 30	E	Lead	95		Final	2018 November ERT Soil Sampling Week 1	43.1822492	-78.687157	11/14/2018	12:00
ERT-0449	P040	S0056	Q2	30	36	30 to 36	F	Lead	16		Final	2018 November ERT Soil Sampling Week 1	43.1822492	-78.687157	11/14/2018	12:00
ERT-0456	P040	S0057	Q2	24	30	24 to 30	E	Lead	640		Final	2018 November ERT Soil Sampling Week 1	43.1821849	-78.687111	11/14/2018	13:35
ERT-0457	P040	S0057	Q2	30	36	30 to 36	F	Lead	500		Final	2018 November ERT Soil Sampling Week 1	43.1821849	-78.687111	11/14/2018	13:35
ERT-0458	P040	S0057	Q2	36	42	36 to 42	G	Lead	180		Final	2018 November ERT Soil Sampling Week 1	43.1821849	-78.687111	11/14/2018	13:35
ERT-0459	P040	S0057	Q2	42	48	42 to 48	H	Lead	15		Final	2018 November ERT Soil Sampling Week 1	43.1821849	-78.687111	11/14/2018	13:35
ERT-0464	P040	S0058	Q2	24	30	24 to 30	E	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1823363	-78.687125	11/14/2018	13:45
ERT-0464D	P040	S0058	Q2	24	30	24 to 30	E	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1823363	-78.687125	11/14/2018	13:45
ERT-0465	P040	S0058	Q2	30	36	30 to 36	F	Lead	11		Final	2018 November ERT Soil Sampling Week 1	43.1823363	-78.687125	11/14/2018	13:45
ERT-0472	P040	S0059	Q2	24	30	24 to 30	E	Lead	130		Final	2018 November ERT Soil Sampling Week 1	43.1822594	-78.68709	11/14/2018	14:00
ERT-0473	P040	S0059	Q2	30	36	30 to 36	F	Lead	33		Final	2018 November ERT Soil Sampling Week 1	43.1822594	-78.68709	11/14/2018	14:00
RI Data	P041	n/a	Q1	2	6	2 to 6	A	Lead	240		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q1	0	2	0 to 2	AA	Lead	227		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q1	6	12	6 to 12	B	Lead	219		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q1	12	18	12 to 18	C	Lead	346		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q1	18	24	18 to 24	D	Lead	169		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q2	2	6	2 to 6	A	Lead	482		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P041	n/a	Q2	0	2	0 to 2	AA	Lead	420		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q2	6	12	6 to 12	B	Lead	389		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q2	12	18	12 to 18	C	Lead	169		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P041	n/a	Q2	18	24	18 to 24	D	Lead	195		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-1350	P041	S0169	Q2	6	12	6 to 12	B	Lead	200		Final	2018 November ERT Soil Sampling Week 2	43.1815812	-78.687256	11/27/2018	15:00
ERT-1351	P041	S0169	Q2	12	18	12 to 18	C	Lead	72		Final	2018 November ERT Soil Sampling Week 2	43.1815812	-78.687256	11/27/2018	15:00
ERT-1358	P041	S0170	Q2	6	12	6 to 12	B	Lead	310		Final	2018 November ERT Soil Sampling Week 2	43.1815724	-78.687363	11/27/2018	15:10
ERT-1359	P041	S0170	Q2	12	18	12 to 18	C	Lead	170		Final	2018 November ERT Soil Sampling Week 2	43.1815724	-78.687363	11/27/2018	15:10
ERT-1366	P041	S0171	Q2	6	12	6 to 12	B	Lead	200		Final	2018 November ERT Soil Sampling Week 2	43.1814881	-78.687312	11/27/2018	15:20
ERT-1367	P041	S0171	Q2	12	18	12 to 18	C	Lead	58		Final	2018 November ERT Soil Sampling Week 2	43.1814881	-78.687312	11/27/2018	15:20
ERT-1374	P041	S0172	Q2	6	12	6 to 12	B	Lead	40		Final	2018 November ERT Soil Sampling Week 2	43.1815158	-78.687222	11/27/2018	15:30
ERT-1375	P041	S0172	Q2	12	18	12 to 18	C	Lead	37		Final	2018 November ERT Soil Sampling Week 2	43.1815158	-78.687222	11/27/2018	15:30
ERT-2977	P041	SW357	Q2	0	6	0 to 6	A	Lead	610		Final	2019 June Delineation Sampling	43.1815895	-78.687376	6/11/2019	15:38
ERT-2978	P041	SW357	Q2	6	12	6 to 12	B	Lead	300		Final	2019 June Delineation Sampling	43.1815895	-78.687376	6/11/2019	15:38
ERT-2956	P041	SW358	Q2	0	6	0 to 6	A	Lead	150		Final	2019 June Delineation Sampling	43.1816347	-78.687232	6/11/2019	14:56
ERT-2957	P041	SW358	Q2	6	12	6 to 12	B	Lead	81		Final	2019 June Delineation Sampling	43.1816347	-78.687232	6/11/2019	14:56
ERT-2960	P041	SW359	Q2	0	6	0 to 6	A	Lead	120		Final	2019 June Delineation Sampling	43.1815592	-78.687199	6/11/2019	15:04
ERT-2961	P041	SW359	Q2	6	12	6 to 12	B	Lead	83		Final	2019 June Delineation Sampling	43.1815592	-78.687199	6/11/2019	15:04
ERT-2965	P041	SW360	Q2	0	6	0 to 6	A	Lead	520		Final	2019 June Delineation Sampling	43.1815095	-78.68718	6/11/2019	15:15
ERT-2966	P041	SW360	Q2	0	6	0 to 6	A	Lead	400		Final	2019 June Delineation Sampling	43.1815095	-78.68718	6/11/2019	15:15
ERT-2967	P041	SW360	Q2	6	12	6 to 12	B	Lead	390		Final	2019 June Delineation Sampling	43.1815095	-78.68718	6/11/2019	15:15
ERT-2968	P041	SW360	Q2	6	12	6 to 12	B	Lead	1000		Final	2019 June Delineation Sampling	43.1815095	-78.68718	6/11/2019	15:15
ERT-2972	P041	SW361	Q2	0	6	0 to 6	A	Lead	160		Final	2019 June Delineation Sampling	43.1814554	-78.687349	6/11/2019	15:23
ERT-2973	P041	SW361	Q2	6	12	6 to 12	B	Lead	73		Final	2019 June Delineation Sampling	43.1814554	-78.687349	6/11/2019	15:23
RI Data	P042	n/a	Q1	2	6	2 to 6	A	Lead	110		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q1	0	2	0 to 2	AA	Lead	95.8		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q1	6	12	6 to 12	B	Lead	263		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q1	12	18	12 to 18	C	Lead	347		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q1	12	18	12 to 18	C	Lead	250		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q1	18	24	18 to 24	D	Lead	145		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q2	2	6	2 to 6	A	Lead	193		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q2	0	2	0 to 2	AA	Lead	174		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q2	6	12	6 to 12	B	Lead	211		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q2	12	18	12 to 18	C	Lead	283		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q2	18	24	18 to 24	D	Lead	516		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0280	P042	S0035	Q2	24	30	24 to 30	E	Lead	50		Final	2018 November ERT Soil Sampling Week 1	43.182682	-78.687478	11/13/2018	13:35
ERT-0281	P042	S0035	Q2	30	36	30 to 36	F	Lead	29		Final	2018 November ERT Soil Sampling Week 1	43.182682	-78.687478	11/13/2018	13:35
ERT-0288	P042	S0036	Q2	24	30	24 to 30	E	Lead	76		Final	2018 November ERT Soil Sampling Week 1	43.1827024	-78.687383	11/13/2018	13:50
ERT-0288D	P042	S0036	Q2	24	30	24 to 30	E	Lead	36		Final	2018 November ERT Soil Sampling Week 1	43.1827024	-78.687383	11/13/2018	13:50
ERT-0289	P042	S0036	Q2	30	36	30 to 36	F	Lead	15		Final	2018 November ERT Soil Sampling Week 1	43.1827024	-78.687383	11/13/2018	13:50
ERT-0289D	P042	S0036	Q2	30	36	30 to 36	F	Lead	16		Final	2018 November ERT Soil Sampling Week 1	43.1827024	-78.687383	11/13/2018	13:50
ERT-0296	P042	S0037	Q2	24	30	24 to 30	E	Lead	50		Final	2018 November ERT Soil Sampling Week 1	43.1827266	-78.687286	11/13/2018	14:00
ERT-0297	P042	S0037	Q2	30	36	30 to 36	F	Lead	34		Final	2018 November ERT Soil Sampling Week 1	43.1827266	-78.687286	11/13/2018	14:00
ERT-0304	P042	S0038	Q2	24	30	24 to 30	E	Lead	20		Final	2018 November ERT Soil Sampling Week 1	43.1826634	-78.687252	11/13/2018	14:20
ERT-0305	P042	S0038	Q2	30	36	30 to 36	F	Lead	26		Final	2018 November ERT Soil Sampling Week 1	43.1826634	-78.687252	11/13/2018	14:20
ERT-0312	P042	S0039	Q2	24	30	24 to 30	E	Lead	380		Final	2018 November ERT Soil Sampling Week 1	43.1826327	-78.687352	11/13/2018	14:45
ERT-0313	P042	S0039	Q2	30	36	30 to 36	F	Lead	330		Final	2018 November ERT Soil Sampling Week 1	43.1826327	-78.687352	11/13/2018	14:45
ERT-0314	P042	S0039	Q2	36	42	36 to 42	G	Lead	250		Final	2018 November ERT Soil Sampling Week 1	43.1826327	-78.687352	11/13/2018	14:45
ERT-0315	P042	S0039	Q2	42	48	42 to 48	H	Lead	230		Final	2018 November ERT Soil Sampling Week 1	43.1826327	-78.687352	11/13/2018	14:45
ERT-0320	P042	S0040	Q2	24	30	24 to 30	E	Lead	13		Final	2018 November ERT Soil Sampling Week 1	43.1826153	-78.68744	11/13/2018	14:50
ERT-0321	P042	S0040	Q2	30	36	30 to 36	F	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1826153	-78.68744	11/13/2018	14:50
ERT-0328	P042	S0041	Q2	24	30	24 to 30	E	Lead	68		Final	2018 November ERT Soil Sampling Week 1	43.1825421	-78.687408	11/13/2018	15:15
ERT-0329	P042	S0041	Q2	30	36	30 to 36	F	Lead	29		Final	2018 November ERT Soil Sampling Week 1	43.1825421	-78.687408	11/13/2018	15:15
ERT-0336	P042	S0042	Q2	24	30	24 to 30	E	Lead	19		Final	2018 November ERT Soil Sampling Week 1	43.182542	-78.687315	11/13/2018	15:30
ERT-0337	P042	S0042	Q2	30	36	30 to 36	F	Lead	20		Final	2018 November ERT Soil Sampling Week 1	43.182542	-78.687315	11/13/2018	15:30

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-0344	P042	S0043	Q2	24	30	24 to 30	E	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1825716	-78.687211	11/13/2018	15:40
ERT-0345	P042	S0043	Q2	30	36	30 to 36	F	Lead	28		Final	2018 November ERT Soil Sampling Week 1	43.1825716	-78.687211	11/13/2018	15:40
ERT-3160	P042	SW387	Q2	12	18	12 to 18	C	Lead	52		Final	2019 June Delineation Sampling	43.1827342	-78.687292	6/13/2019	9:33
ERT-3161	P042	SW387	Q2	18	24	18 to 24	D	Lead	16		Final	2019 June Delineation Sampling	43.1827342	-78.687292	6/13/2019	9:33
ERT-3170	P042	SW388	Q2	12	18	12 to 18	C	Lead	400		Final	2019 June Delineation Sampling	43.182599	-78.687235	6/13/2019	10:07
ERT-3171	P042	SW388	Q2	18	24	18 to 24	D	Lead	87		Final	2019 June Delineation Sampling	43.182599	-78.687235	6/13/2019	10:07
RI Data	P042	n/a	Q3	2	6	2 to 6	A	Lead	256		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q3	0	2	0 to 2	AA	Lead	287		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q3	6	12	6 to 12	B	Lead	428		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q3	12	18	12 to 18	C	Lead	574		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P042	n/a	Q3	18	24	18 to 24	D	Lead	210		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0351	P042	S0044	Q3	18	24	18 to 24	D	Lead	24		Final	2018 November ERT Soil Sampling Week 1	43.1824949	-78.687231	11/13/2018	15:55
ERT-0352	P042	S0044	Q3	24	30	24 to 30	E	Lead	10		Final	2018 November ERT Soil Sampling Week 1	43.1824949	-78.687231	11/13/2018	15:55
ERT-0359	P042	S0045	Q3	18	24	18 to 24	D	Lead	13		Final	2018 November ERT Soil Sampling Week 1	43.1824818	-78.687274	11/13/2018	16:05
ERT-0360	P042	S0045	Q3	24	30	24 to 30	E	Lead	22		Final	2018 November ERT Soil Sampling Week 1	43.1824818	-78.687274	11/13/2018	16:05
ERT-0367	P042	S0046	Q3	18	24	18 to 24	D	Lead	71		Final	2018 November ERT Soil Sampling Week 1	43.1824375	-78.687386	11/13/2018	16:25
ERT-0368	P042	S0046	Q3	24	30	24 to 30	E	Lead	47		Final	2018 November ERT Soil Sampling Week 1	43.1824375	-78.687386	11/13/2018	16:25
ERT-0375	P042	S0047	Q3	18	24	18 to 24	D	Lead	110		Final	2018 November ERT Soil Sampling Week 1	43.1824001	-78.687172	11/14/2018	8:25
ERT-0376	P042	S0047	Q3	24	30	24 to 30	E	Lead	35		Final	2018 November ERT Soil Sampling Week 1	43.1824001	-78.687172	11/14/2018	8:25
ERT-0376D	P042	S0047	Q3	24	30	24 to 30	E	Lead	28		Final	2018 November ERT Soil Sampling Week 1	43.1824001	-78.687172	11/14/2018	8:25
ERT-0382	P042	S0048	Q3	12	18	12 to 18	C	Lead	100		Final	2018 November ERT Soil Sampling Week 1	43.1823638	-78.687259	11/14/2018	8:45
ERT-0383	P042	S0048	Q3	18	24	18 to 24	D	Lead	47		Final	2018 November ERT Soil Sampling Week 1	43.1823638	-78.687259	11/14/2018	8:45
ERT-0384	P042	S0048	Q3	24	30	24 to 30	E	Lead	21		Final	2018 November ERT Soil Sampling Week 1	43.1823638	-78.687259	11/14/2018	8:45
ERT-0391	P042	S0049	Q3	18	24	18 to 24	D	Lead	17		Final	2018 November ERT Soil Sampling Week 1	43.1823663	-78.687354	11/14/2018	9:00
ERT-0392	P042	S0049	Q3	24	30	24 to 30	E	Lead	11		Final	2018 November ERT Soil Sampling Week 1	43.1823663	-78.687354	11/14/2018	9:00
ERT-3163	P042	SW389	Q3	6	12	6 to 12	B	Lead	160		Final	2019 June Delineation Sampling	43.1825436	-78.687225	6/13/2019	9:45
ERT-3164	P042	SW389	Q3	12	18	12 to 18	C	Lead	260		Final	2019 June Delineation Sampling	43.1825436	-78.687225	6/13/2019	9:45
RI Data	P045	n/a	Q1	2	6	2 to 6	A	Lead	988		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q1	0	2	0 to 2	AA	Lead	971		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q1	6	12	6 to 12	B	Lead	1240		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q1	12	18	12 to 18	C	Lead	1120		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q1	18	24	18 to 24	D	Lead	434		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0961	P045	S0120	Q1	24	30	24 to 30	E	Lead	75		Final	2018 November ERT Soil Sampling Week 2	43.1814946	-78.685901	11/26/2018	10:40
ERT-0962	P045	S0120	Q1	30	36	30 to 36	F	Lead	55		Final	2018 November ERT Soil Sampling Week 2	43.1814946	-78.685901	11/26/2018	10:40
ERT-2760	P045	SW327	Q1	6	12	6 to 12	B	Lead	260		Final	2019 June Delineation Sampling	43.1816143	-78.685907	6/10/2019	14:31
ERT-2761	P045	SW327	Q1	12	18	12 to 18	C	Lead	26		Final	2019 June Delineation Sampling	43.1816143	-78.685907	6/10/2019	14:31
ERT-2768	P045	SW328	Q1	6	12	6 to 12	B	Lead	470		Final	2019 June Delineation Sampling	43.1815516	-78.685836	6/10/2019	14:41
ERT-2769	P045	SW328	Q1	6	12	6 to 12	B	Lead	320		Final	2019 June Delineation Sampling	43.1815516	-78.685836	6/10/2019	14:41
ERT-2770	P045	SW328	Q1	12	18	12 to 18	C	Lead	160		Final	2019 June Delineation Sampling	43.1815516	-78.685836	6/10/2019	14:41
ERT-2771	P045	SW328	Q1	12	18	12 to 18	C	Lead	160		Final	2019 June Delineation Sampling	43.1815516	-78.685836	6/10/2019	14:41
RI Data	P045	n/a	Q2	2	6	2 to 6	A	Lead	420		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q2	2	6	2 to 6	A	Lead	413		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q2	0	2	0 to 2	AA	Lead	399		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q2	6	12	6 to 12	B	Lead	419		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q2	12	18	12 to 18	C	Lead	299		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q2	18	24	18 to 24	D	Lead	262		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0903	P045	S0113	Q2	12	18	12 to 18	C	Lead	39		Final	2018 November ERT Soil Sampling Week 2	43.1814053	-78.685733	11/26/2018	9:05
ERT-0904	P045	S0113	Q2	18	24	18 to 24	D	Lead	140		Final	2018 November ERT Soil Sampling Week 2	43.1814053	-78.685733	11/26/2018	9:05
ERT-0904D	P045	S0113	Q2	18	24	18 to 24	D	Lead	45		Final	2018 November ERT Soil Sampling Week 2	43.1814053	-78.685733	11/26/2018	9:05
ERT-0911	P045	S0114	Q2	12	18	12 to 18	C	Lead	53		Final	2018 November ERT Soil Sampling Week 2	43.1813766	-78.68578	11/26/2018	9:20
ERT-0912	P045	S0114	Q2	18	24	18 to 24	D	Lead	31		Final	2018 November ERT Soil Sampling Week 2	43.1813766	-78.68578	11/26/2018	9:20
ERT-0935	P045	S0117	Q2	12	18	12 to 18	C	Lead	130		Final	2018 November ERT Soil Sampling Week 2	43.1814096	-78.685887	11/26/2018	10:05
ERT-0935D	P045	S0117	Q2	12	18	12 to 18	C	Lead	150		Final	2018 November ERT Soil Sampling Week 2	43.1814096	-78.685887	11/26/2018	10:05
ERT-0936	P045	S0117	Q2	18	24	18 to 24	D	Lead	59		Final	2018 November ERT Soil Sampling Week 2	43.1814096	-78.685887	11/26/2018	10:05
ERT-0943	P045	S0118	Q2	12	18	12 to 18	C	Lead	880		Final	2018 November ERT Soil Sampling Week 2	43.1814793	-78.685785	11/26/2018	10:15

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-0944	P045	S0118	Q2	18	24	18 to 24	D	Lead	230		Final	2018 November ERT Soil Sampling Week 2	43.1814793	-78.685785	11/26/2018	10:15
ERT-0945	P045	S0118	Q2	24	30	24 to 30	E	Lead	80	J	Final	2018 November ERT Soil Sampling Week 2	43.1814793	-78.685785	11/26/2018	10:15
ERT-0946	P045	S0118	Q2	30	36	30 to 36	F	Lead	180	J	Final	2018 November ERT Soil Sampling Week 2	43.1814793	-78.685785	11/26/2018	10:15
ERT-2778	P045	SW329	Q2	6	12	6 to 12	B	Lead	120		Final	2019 June Delineation Sampling	43.181492	-78.685755	6/10/2019	15:26
ERT-2779	P045	SW329	Q2	12	18	12 to 18	C	Lead	53		Final	2019 June Delineation Sampling	43.181492	-78.685755	6/10/2019	15:26
ERT-2786	P045	SW330	Q2	6	12	6 to 12	B	Lead	180		Final	2019 June Delineation Sampling	43.1814334	-78.685685	6/10/2019	15:33
ERT-2787	P045	SW330	Q2	6	12	6 to 12	B	Lead	180		Final	2019 June Delineation Sampling	43.1814334	-78.685685	6/10/2019	15:33
ERT-2788	P045	SW330	Q2	12	18	12 to 18	C	Lead	63		Final	2019 June Delineation Sampling	43.1814334	-78.685685	6/10/2019	15:33
RI Data	P045	n/a	Q3	2	6	2 to 6	A	Lead	423		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q3	0	2	0 to 2	AA	Lead	356		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q3	6	12	6 to 12	B	Lead	471		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q3	12	18	12 to 18	C	Lead	240		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q3	18	24	18 to 24	D	Lead	164		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0919	P045	S0115	Q3	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 2	43.1813031	-78.685874	11/26/2018	9:40
ERT-0920	P045	S0115	Q3	18	24	18 to 24	D	Lead	80		Final	2018 November ERT Soil Sampling Week 2	43.1813031	-78.685874	11/26/2018	9:40
ERT-0927	P045	S0116	Q3	12	18	12 to 18	C	Lead	110		Final	2018 November ERT Soil Sampling Week 2	43.1813574	-78.685957	11/26/2018	9:50
ERT-0928	P045	S0116	Q3	18	24	18 to 24	D	Lead	71		Final	2018 November ERT Soil Sampling Week 2	43.1813574	-78.685957	11/26/2018	9:50
ERT-0991	P045	S0124	Q3	12	18	12 to 18	C	Lead	120		Final	2018 November ERT Soil Sampling Week 2	43.1813212	-78.685999	11/26/2018	11:25
ERT-0992	P045	S0124	Q3	18	24	18 to 24	D	Lead	48		Final	2018 November ERT Soil Sampling Week 2	43.1813212	-78.685999	11/26/2018	11:25
RI Data	P045	n/a	Q4	2	6	2 to 6	A	Lead	386		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q4	0	2	0 to 2	AA	Lead	416		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q4	6	12	6 to 12	B	Lead	419		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q4	12	18	12 to 18	C	Lead	359		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P045	n/a	Q4	18	24	18 to 24	D	Lead	108		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0951	P045	S0119	Q4	12	18	12 to 18	C	Lead	170		Final	2018 November ERT Soil Sampling Week 2	43.1814386	-78.685957	11/26/2018	10:25
ERT-0952	P045	S0119	Q4	18	24	18 to 24	D	Lead	180		Final	2018 November ERT Soil Sampling Week 2	43.1814386	-78.685957	11/26/2018	10:25
ERT-0952D	P045	S0119	Q4	18	24	18 to 24	D	Lead	130		Final	2018 November ERT Soil Sampling Week 2	43.1814386	-78.685957	11/26/2018	10:25
ERT-0967	P045	S0121	Q4	12	18	12 to 18	C	Lead	43		Final	2018 November ERT Soil Sampling Week 2	43.1815415	-78.686082	11/26/2018	10:50
ERT-0968	P045	S0121	Q4	18	24	18 to 24	D	Lead	77		Final	2018 November ERT Soil Sampling Week 2	43.1815415	-78.686082	11/26/2018	10:50
ERT-0975	P045	S0122	Q4	12	18	12 to 18	C	Lead	150		Final	2018 November ERT Soil Sampling Week 2	43.181585	-78.68608	11/26/2018	11:00
ERT-0976	P045	S0122	Q4	18	24	18 to 24	D	Lead	56		Final	2018 November ERT Soil Sampling Week 2	43.181585	-78.68608	11/26/2018	11:00
ERT-0983	P045	S0123	Q4	12	18	12 to 18	C	Lead	140		Final	2018 November ERT Soil Sampling Week 2	43.1814346	-78.686132	11/26/2018	11:15
ERT-0984	P045	S0123	Q4	18	24	18 to 24	D	Lead	110		Final	2018 November ERT Soil Sampling Week 2	43.1814346	-78.686132	11/26/2018	11:15
RI Data	P046	n/a	Q1	2	6	2 to 6	A	Lead	368		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q1	0	2	0 to 2	AA	Lead	366		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q1	6	12	6 to 12	B	Lead	415		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q1	12	18	12 to 18	C	Lead	257		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q1	18	24	18 to 24	D	Lead	150		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0839	P046	S0105	Q1	12	18	12 to 18	C	Lead	15		Final	2018 November ERT Soil Sampling Week 1	43.1817177	-78.686372	11/16/2018	11:30
ERT-0840	P046	S0105	Q1	18	24	18 to 24	D	Lead	12		Final	2018 November ERT Soil Sampling Week 1	43.1817177	-78.686372	11/16/2018	11:30
ERT-0847	P046	S0106	Q1	12	18	12 to 18	C	Lead	140		Final	2018 November ERT Soil Sampling Week 1	43.1816596	-78.686297	11/16/2018	11:45
ERT-0848	P046	S0106	Q1	18	24	18 to 24	D	Lead	30		Final	2018 November ERT Soil Sampling Week 1	43.1816596	-78.686297	11/16/2018	11:45
ERT-0855	P046	S0107	Q1	12	18	12 to 18	C	Lead	86		Final	2018 November ERT Soil Sampling Week 1	43.1817013	-78.686228	11/16/2018	11:55
ERT-0856	P046	S0107	Q1	18	24	18 to 24	D	Lead	55		Final	2018 November ERT Soil Sampling Week 1	43.1817013	-78.686228	11/16/2018	11:55
ERT-0863	P046	S0108	Q1	12	18	12 to 18	C	Lead	95		Final	2018 November ERT Soil Sampling Week 1	43.1817596	-78.686303	11/16/2018	12:10
ERT-0864	P046	S0108	Q1	18	24	18 to 24	D	Lead	9.1		Final	2018 November ERT Soil Sampling Week 1	43.1817596	-78.686303	11/16/2018	12:10
ERT-0871	P046	S0109	Q1	12	18	12 to 18	C	Lead	150		Final	2018 November ERT Soil Sampling Week 1	43.1817996	-78.686383	11/16/2018	12:20
ERT-0872	P046	S0109	Q1	18	24	18 to 24	D	Lead	66		Final	2018 November ERT Soil Sampling Week 1	43.1817996	-78.686383	11/16/2018	12:20
ERT-0879	P046	S0110	Q1	12	18	12 to 18	C	Lead	330		Final	2018 November ERT Soil Sampling Week 1	43.1818608	-78.686368	11/16/2018	12:30
ERT-0880	P046	S0110	Q1	18	24	18 to 24	D	Lead	32		Final	2018 November ERT Soil Sampling Week 1	43.1818608	-78.686368	11/16/2018	12:30
ERT-2802	P046	SW331	Q1	0	6	0 to 6	A	Lead	220		Final	2019 June Delineation Sampling	43.1818145	-78.685982	6/11/2019	7:46
ERT-2803	P046	SW331	Q1	0	6	0 to 6	A	Lead	220		Final	2019 June Delineation Sampling	43.1818145	-78.685982	6/11/2019	7:46
ERT-2804	P046	SW331	Q1	6	12	6 to 12	B	Lead	240		Final	2019 June Delineation Sampling	43.1818145	-78.685982	6/11/2019	7:46
ERT-2805	P046	SW331	Q1	6	12	6 to 12	B	Lead	230		Final	2019 June Delineation Sampling	43.1818145	-78.685982	6/11/2019	7:46
RI Data	P046	n/a	Q2	2	6	2 to 6	A	Lead	624		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P046	n/a	Q2	0	2	0 to 2	AA	Lead	588		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q2	6	12	6 to 12	B	Lead	569		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q2	12	18	12 to 18	C	Lead	347		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q2	18	24	18 to 24	D	Lead	267		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0799	P046	S0100	Q2	12	18	12 to 18	C	Lead	52		Final	2018 November ERT Soil Sampling Week 1	43.1820444	-78.686492	11/16/2018	10:15
ERT-0800	P046	S0100	Q2	18	24	18 to 24	D	Lead	15		Final	2018 November ERT Soil Sampling Week 1	43.1820444	-78.686492	11/16/2018	10:15
ERT-0807	P046	S0101	Q2	12	18	12 to 18	C	Lead	45		Final	2018 November ERT Soil Sampling Week 1	43.1819823	-78.686444	11/16/2018	10:30
ERT-0808	P046	S0101	Q2	18	24	18 to 24	D	Lead	16		Final	2018 November ERT Soil Sampling Week 1	43.1819823	-78.686444	11/16/2018	10:30
ERT-0815	P046	S0102	Q2	12	18	12 to 18	C	Lead	260		Final	2018 November ERT Soil Sampling Week 1	43.1819002	-78.686467	11/16/2018	10:45
ERT-0816	P046	S0102	Q2	18	24	18 to 24	D	Lead	280		Final	2018 November ERT Soil Sampling Week 1	43.1819002	-78.686467	11/16/2018	10:45
ERT-0817	P046	S0102	Q2	24	30	24 to 30	E	Lead	38	J	Final	2018 November ERT Soil Sampling Week 1	43.1819002	-78.686467	11/16/2018	10:45
ERT-0818	P046	S0102	Q2	30	36	30 to 36	F	Lead	37	J	Final	2018 November ERT Soil Sampling Week 1	43.1819002	-78.686467	11/16/2018	10:45
ERT-0823	P046	S0103	Q2	12	18	12 to 18	C	Lead	210		Final	2018 November ERT Soil Sampling Week 1	43.181841	-78.686428	11/16/2018	11:00
ERT-0824	P046	S0103	Q2	18	24	18 to 24	D	Lead	160		Final	2018 November ERT Soil Sampling Week 1	43.181841	-78.686428	11/16/2018	11:00
ERT-0831	P046	S0104	Q2	12	18	12 to 18	C	Lead	570		Final	2018 November ERT Soil Sampling Week 1	43.1817775	-78.686434	11/16/2018	11:15
ERT-0832	P046	S0104	Q2	18	24	18 to 24	D	Lead	180		Final	2018 November ERT Soil Sampling Week 1	43.1817775	-78.686434	11/16/2018	11:15
ERT-0887	P046	S0111	Q2	12	18	12 to 18	C	Lead	680		Final	2018 November ERT Soil Sampling Week 1	43.1819291	-78.686372	11/16/2018	12:45
ERT-0888	P046	S0111	Q2	18	24	18 to 24	D	Lead	760		Final	2018 November ERT Soil Sampling Week 1	43.1819291	-78.686372	11/16/2018	12:45
ERT-0889	P046	S0111	Q2	24	30	24 to 30	E	Lead	90		Final	2018 November ERT Soil Sampling Week 1	43.1819291	-78.686372	11/16/2018	12:45
ERT-0890	P046	S0111	Q2	30	36	30 to 36	F	Lead	11		Final	2018 November ERT Soil Sampling Week 1	43.1819291	-78.686372	11/16/2018	12:45
ERT-0895	P046	S0112	Q2	12	18	12 to 18	C	Lead	240		Final	2018 November ERT Soil Sampling Week 1	43.1819141	-78.686295	11/16/2018	13:00
ERT-0896	P046	S0112	Q2	18	24	18 to 24	D	Lead	100		Final	2018 November ERT Soil Sampling Week 1	43.1819141	-78.686295	11/16/2018	13:00
RI Data	P046	n/a	Q3	2	6	2 to 6	A	Lead	436		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q3	2	6	2 to 6	A	Lead	357		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q3	0	2	0 to 2	AA	Lead	386		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q3	6	12	6 to 12	B	Lead	280		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q3	12	18	12 to 18	C	Lead	208		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q3	18	24	18 to 24	D	Lead	84.4		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0758	P046	S0095	Q3	6	12	6 to 12	B	Lead	250		Final	2018 November ERT Soil Sampling Week 1	43.181852	-78.686246	11/16/2018	9:10
ERT-0758D	P046	S0095	Q3	6	12	6 to 12	B	Lead	220		Final	2018 November ERT Soil Sampling Week 1	43.181852	-78.686246	11/16/2018	9:10
ERT-0759	P046	S0095	Q3	12	18	12 to 18	C	Lead	140		Final	2018 November ERT Soil Sampling Week 1	43.181852	-78.686246	11/16/2018	9:10
ERT-0759D	P046	S0095	Q3	12	18	12 to 18	C	Lead	130		Final	2018 November ERT Soil Sampling Week 1	43.181852	-78.686246	11/16/2018	9:10
ERT-0766	P046	S0096	Q3	6	12	6 to 12	B	Lead	1700		Final	2018 November ERT Soil Sampling Week 1	43.1819092	-78.686205	11/16/2018	9:25
ERT-0767	P046	S0096	Q3	12	18	12 to 18	C	Lead	1000		Final	2018 November ERT Soil Sampling Week 1	43.1819092	-78.686205	11/16/2018	9:25
ERT-0768	P046	S0096	Q3	18	24	18 to 24	D	Lead	250		Final	2018 November ERT Soil Sampling Week 1	43.1819092	-78.686205	11/16/2018	9:25
ERT-0769	P046	S0096	Q3	24	30	24 to 30	E	Lead	160		Final	2018 November ERT Soil Sampling Week 1	43.1819092	-78.686205	11/16/2018	9:25
ERT-0774	P046	S0097	Q3	6	12	6 to 12	B	Lead	570		Final	2018 November ERT Soil Sampling Week 1	43.1819722	-78.686284	11/16/2018	9:40
ERT-0775	P046	S0097	Q3	12	18	12 to 18	C	Lead	270		Final	2018 November ERT Soil Sampling Week 1	43.1819722	-78.686284	11/16/2018	9:40
ERT-0776	P046	S0097	Q3	18	24	18 to 24	D	Lead	170		Final	2018 November ERT Soil Sampling Week 1	43.1819722	-78.686284	11/16/2018	9:40
ERT-0777	P046	S0097	Q3	24	30	24 to 30	E	Lead	120		Final	2018 November ERT Soil Sampling Week 1	43.1819722	-78.686284	11/16/2018	9:40
ERT-0782	P046	S0098	Q3	6	12	6 to 12	B	Lead	880		Final	2018 November ERT Soil Sampling Week 1	43.182043	-78.686351	11/16/2018	9:55
ERT-0783	P046	S0098	Q3	12	18	12 to 18	C	Lead	41		Final	2018 November ERT Soil Sampling Week 1	43.182043	-78.686351	11/16/2018	9:55
ERT-0790	P046	S0099	Q3	6	12	6 to 12	B	Lead	300		Final	2018 November ERT Soil Sampling Week 1	43.1821072	-78.686437	11/16/2018	10:00
ERT-0791	P046	S0099	Q3	12	18	12 to 18	C	Lead	130		Final	2018 November ERT Soil Sampling Week 1	43.1821072	-78.686437	11/16/2018	10:00
ERT-2357	P046	S0313	Q3	12	18	12 to 18	C	Lead	130		Final	2019 April ERT Soil Sampling Week 1	43.1818376	-78.686544	4/24/2019	15:05
ERT-2358	P046	S0313	Q3	18	24	18 to 24	D	Lead	21		Final	2019 April ERT Soil Sampling Week 1	43.1818376	-78.686544	4/24/2019	15:05
ERT-2349	P046	S0314	Q3	12	18	12 to 18	C	Lead	75		Final	2019 April ERT Soil Sampling Week 1	43.1819699	-78.686559	4/24/2019	14:57
ERT-2350	P046	S0314	Q3	18	24	18 to 24	D	Lead	27		Final	2019 April ERT Soil Sampling Week 1	43.1819699	-78.686559	4/24/2019	14:57
ERT-2365	P046	S0315	Q3	12	18	12 to 18	C	Lead	98		Final	2019 April ERT Soil Sampling Week 1	43.1816308	-78.686402	4/24/2019	15:12
ERT-2366	P046	S0315	Q3	18	24	18 to 24	D	Lead	47		Final	2019 April ERT Soil Sampling Week 1	43.1816308	-78.686402	4/24/2019	15:12
ERT-2828	P046	SW335	Q3	0	6	0 to 6	A	Lead	950		Final	2019 June Delineation Sampling	43.1821	-78.686377	6/11/2019	8:29
ERT-2829	P046	SW335	Q3	6	12	6 to 12	B	Lead	840		Final	2019 June Delineation Sampling	43.1821	-78.686377	6/11/2019	8:29
RI Data	P046	n/a	Q4	2	6	2 to 6	A	Lead	566		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q4	0	2	0 to 2	AA	Lead	537		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q4	6	12	6 to 12	B	Lead	462		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
RI Data	P046	n/a	Q4	12	18	12 to 18	C	Lead	315		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
RI Data	P046	n/a	Q4	18	24	18 to 24	D	Lead	261		n/a	Weston Composite Risk Sampling	n/a	n/a	2017	n/a
ERT-0749	P046	S0094	Q4	0	6	0 to 6	A	Lead	430		Final	2018 November ERT Soil Sampling Week 1	43.1817659	-78.686065	11/16/2018	8:45
ERT-0751	P046	S0094	Q4	12	18	12 to 18	C	Lead	170		Final	2018 November ERT Soil Sampling Week 1	43.1817659	-78.686065	11/16/2018	8:45
ERT-0752	P046	S0094	Q4	18	24	18 to 24	D	Lead	120		Final	2018 November ERT Soil Sampling Week 1	43.1817659	-78.686065	11/16/2018	8:45
ERT-2550	P048	RS001	Q1	2	6	2 to 6	A	Lead	120		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	15:20
ERT-2549	P048	RS001	Q1	0	2	0 to 2	AA	Lead	110		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	15:15
ERT-2551	P048	RS001	Q1	6	12	6 to 12	B	Lead	200		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	15:25
ERT-2552	P048	RS001	Q1	12	18	12 to 18	C	Lead	190		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	15:30
ERT-2553	P048	RS001	Q1	18	24	18 to 24	D	Lead	220		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	15:35
ERT-2539	P048	RS002	Q2	2	6	2 to 6	A	Lead	310		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	11:00
ERT-2538	P048	RS002	Q2	0	2	0 to 2	AA	Lead	280		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	10:55
ERT-2540	P048	RS002	Q2	6	12	6 to 12	B	Lead	430		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	11:12
ERT-2541	P048	RS002	Q2	12	18	12 to 18	C	Lead	300		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	11:06
ERT-2542	P048	RS002	Q2	18	24	18 to 24	D	Lead	99		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	11:24
ERT-2543	P048	RS002	Q2	18	24	18 to 24	D	Lead	97		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/6/2019	11:24
ERT-2686	P048	S0316	Q2	12	18	12 to 18	C	Lead	240		Final	2019 June Delineation Sampling	43.1820175	-78.686183	6/10/2019	9:52
ERT-2687	P048	S0316	Q2	18	24	18 to 24	D	Lead	94		Final	2019 June Delineation Sampling	43.1820175	-78.686183	6/10/2019	9:52
ERT-2670	P048	S0317	Q2	12	18	12 to 18	C	Lead	120		Final	2019 June Delineation Sampling	43.182146	-78.686169	6/10/2019	9:20
ERT-2671	P048	S0317	Q2	18	24	18 to 24	D	Lead	67		Final	2019 June Delineation Sampling	43.182146	-78.686169	6/10/2019	9:20
ERT-2678	P048	S0318	Q2	12	18	12 to 18	C	Lead	110		Final	2019 June Delineation Sampling	43.1820696	-78.686126	6/10/2019	9:40
ERT-2679	P048	S0318	Q2	18	24	18 to 24	D	Lead	72		Final	2019 June Delineation Sampling	43.1820696	-78.686126	6/10/2019	9:40
ERT-2693	P048	SW319	Q2	6	12	6 to 12	B	Lead	460		Final	2019 June Delineation Sampling	43.1821565	-78.686202	6/10/2019	10:03
ERT-2571	P049	RS007	Q1	2	6	2 to 6	A	Lead	140		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	10:20
ERT-2570	P049	RS007	Q1	0	2	0 to 2	AA	Lead	180		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	10:15
ERT-2572	P049	RS007	Q1	6	12	6 to 12	B	Lead	290		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	10:25
ERT-2573	P049	RS007	Q1	12	18	12 to 18	C	Lead	270		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	10:30
ERT-2574	P049	RS007	Q1	18	24	18 to 24	D	Lead	160		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	10:35
ERT-2625	P049	RS017	Q2	2	6	2 to 6	A	Lead	310		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	9:15
ERT-2624	P049	RS017	Q2	2	6	2 to 6	A	Lead	290		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	9:15
ERT-2623	P049	RS017	Q2	0	2	0 to 2	AA	Lead	390		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	9:10
ERT-2626	P049	RS017	Q2	6	12	6 to 12	B	Lead	300		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	9:20
ERT-2627	P049	RS017	Q2	12	18	12 to 18	C	Lead	230		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	9:25
ERT-2628	P049	RS017	Q2	18	24	18 to 24	D	Lead	78		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	9:30
ERT-2820	P049	SW333	Q2	0	6	0 to 6	A	Lead	290		Final	2019 June Delineation Sampling	43.1819849	-78.685676	6/11/2019	8:06
ERT-2936	P049	SW352	Q2	0	6	0 to 6	A	Lead	140		Final	2019 June Delineation Sampling	43.182248	-78.685968	6/11/2019	13:53
ERT-2941	P049	SW353	Q2	0	6	0 to 6	A	Lead	330		Final	2019 June Delineation Sampling	43.1821816	-78.685918	6/11/2019	14:00
ERT-2946	P049	SW354	Q2	0	6	0 to 6	A	Lead	490		Final	2019 June Delineation Sampling	43.1821121	-78.685836	6/11/2019	14:19
ERT-2931	P049	SW351	Q3	0	6	0 to 6	A	Lead	960		Final	2019 June Delineation Sampling	43.1822857	-78.686065	6/11/2019	13:38
ERT-2635	P050	RS019	Q1	2	6	2 to 6	A	Lead	240		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	10:35
ERT-2634	P050	RS019	Q1	0	2	0 to 2	AA	Lead	230		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	10:30
ERT-2636	P050	RS019	Q1	6	12	6 to 12	B	Lead	260		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	10:40
ERT-2637	P050	RS019	Q1	12	18	12 to 18	C	Lead	37		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	10:45
ERT-2638	P050	RS019	Q1	18	24	18 to 24	D	Lead	21		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	10:50
ERT-2640	P050	RS020	Q2	2	6	2 to 6	A	Lead	240		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	11:05
ERT-2641	P050	RS020	Q2	2	6	2 to 6	A	Lead	230		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	11:05
ERT-2639	P050	RS020	Q2	0	2	0 to 2	AA	Lead	200		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	11:00
ERT-2642	P050	RS020	Q2	6	12	6 to 12	B	Lead	320		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	11:10
ERT-2643	P050	RS020	Q2	12	18	12 to 18	C	Lead	360		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	11:15
ERT-2644	P050	RS020	Q2	18	24	18 to 24	D	Lead	190		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/8/2019	11:20
ERT-2718	P050	S0322	Q2	12	18	12 to 18	C	Lead	46		Final	2019 June Delineation Sampling	43.1819544	-78.686053	6/10/2019	11:52
ERT-2719	P050	S0322	Q2	18	24	18 to 24	D	Lead	230		Final	2019 June Delineation Sampling	43.1819544	-78.686053	6/10/2019	11:52
ERT-2720	P050	S0322	Q2	24	30	24 to 30	E	Lead	310		Final	2019 June Delineation Sampling	43.1819544	-78.686053	6/10/2019	11:52
ERT-2726	P050	S0323	Q2	12	18	12 to 18	C	Lead	420		Final	2019 June Delineation Sampling	43.1820107	-78.686097	6/10/2019	12:00
ERT-2727	P050	S0323	Q2	12	18	12 to 18	C	Lead	520		Final	2019 June Delineation Sampling	43.1820107	-78.686097	6/10/2019	12:00

Sample Number	Property ID	Sample Location	QUAD Revised	Samp Depth	Samp Depth To	Depth (inches)	Sub Location	Analyte	Final Result	Qual	Validation Level	Event	Latitude	Longitude	Sample Date	Sample Time
ERT-2728	P050	S0323	Q2	18	24	18 to 24	D	Lead	170		Final	2019 June Delineation Sampling	43.1820107	-78.686097	6/10/2019	12:00
ERT-2729	P050	S0323	Q2	18	24	18 to 24	D	Lead	120		Final	2019 June Delineation Sampling	43.1820107	-78.686097	6/10/2019	12:00
ERT-2730	P050	S0323	Q2	24	30	24 to 30	E	Lead	48		Final	2019 June Delineation Sampling	43.1820107	-78.686097	6/10/2019	12:00
ERT-2731	P050	S0323	Q2	24	30	24 to 30	E	Lead	59		Final	2019 June Delineation Sampling	43.1820107	-78.686097	6/10/2019	12:00
ERT-2601	P051	n/a	Q1	2	6	2 to 6	A	Lead	440		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:25
ERT-2600	P051	n/a	Q1	0	2	0 to 2	AA	Lead	420		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:20
ERT-2602	P051	n/a	Q1	6	12	6 to 12	B	Lead	450		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:30
ERT-2603	P051	n/a	Q1	12	18	12 to 18	C	Lead	210		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:35
ERT-2604	P051	n/a	Q1	18	24	18 to 24	D	Lead	47		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:40
ERT-2737	P051	S0325	Q1	12	18	12 to 18	C	Lead	340		Final	2019 June Delineation Sampling	43.1819119	-78.68584	6/10/2019	13:34
ERT-2738	P051	S0325	Q1	18	24	18 to 24	D	Lead	97		Final	2019 June Delineation Sampling	43.1819119	-78.68584	6/10/2019	13:34
ERT-2812	P051	SW332	Q1	0	6	0 to 6	A	Lead	37		Final	2019 June Delineation Sampling	43.1818692	-78.68585	6/11/2019	7:57
ERT-2813	P051	SW332	Q1	6	12	6 to 12	B	Lead	64		Final	2019 June Delineation Sampling	43.1818692	-78.68585	6/11/2019	7:57
ERT-2596	P051	n/a	Q2	2	6	2 to 6	A	Lead	540		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	14:50
ERT-2595	P051	n/a	Q2	0	2	0 to 2	AA	Lead	480		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	14:45
ERT-2597	P051	n/a	Q2	6	12	6 to 12	B	Lead	410		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	14:55
ERT-2598	P051	n/a	Q2	12	18	12 to 18	C	Lead	220		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:00
ERT-2599	P051	n/a	Q2	18	24	18 to 24	D	Lead	94		n/a	2019 May ERT Risk Sampling Week 1	n/a	n/a	5/7/2019	15:05
ERT-2796	P051	S0334	Q2	12	18	12 to 18	C	Lead	270		Final	2019 June Delineation Sampling	43.1820481	-78.686002	6/10/2019	16:32
ERT-2797	P051	S0334	Q2	18	24	18 to 24	D	Lead	47		Final	2019 June Delineation Sampling	43.1820481	-78.686002	6/10/2019	16:32

APPENDIX B

Arboreal Survey Data for OU4 Properties
Eighteen Mile Creek Superfund Site
Lockport, NY

ARBOREAL SURVEY DATA FOR OU4 PROPERTIES
18 MILE CREEK SUPERFUND SITE
LOCKPORT, NY

Property		No.	~ height	Common Name	Species	Cultivar (if applicable) or other unique characteristics	Notes
P002	Big Trees	1	80' +	Walnut	<i>Juglans sp.</i>	N/A	
		1	20'	Silver Maple	<i>Acer saccharinum</i>	N/A - Most likely volunteer	
	Small Trees	0					
	Shrubs	0					
	Perennials						
		1		Hosta	<i>Hosta undulata mediovariegata</i>	mediovariegata	
		several		Creeping Lamium	<i>Lamium maculatum</i>	? "White Nancy"	
	Garden bedding						
	Other landscape features						
P003	Big Trees	2	60'	Silver Maple	<i>Acer saccharinum</i>	Apprent volunteers.	
	Small Trees	2		Arboretiae	<i>Thuja occidentalis</i>	N/A Unknown	
		2		St. Lucy Cherry (?)	<i>Prunus mahaleb</i>	N/A	
		2		Apple	<i>Malus sylvestris</i>	Unknown	
		2		Red Maple	<i>Acer rubrum</i>	Back yard.	
		2		Walnuts		Volunteers (?), near back of house (east and south)	
	Shrubs	1		Common Lilac	<i>Syringa vulgaris</i>	"alba" white flowered	
	Perennials	2		Peonies	<i>Paeonia</i> hybrid	Unknown	
	Garden bedding						
	Other landscape features						
P004	Big Trees	3	80'+	Silver Maples	<i>Acer saccharinum</i>	N/A	
		2	Varied, very large	Norway Maples	<i>Acer platanoides</i>	N/A	
		2		Boxelders	<i>Acer negundo</i>	N/A	
		1		Walnut	<i>Juglans nigra</i>	N/A	
	Small Trees	1	40'	Arboretiae	<i>Thuja occidentalis</i>	N/A	
	Shrubs	0					
	Perennials	0					
	Garden bedding						
	Other landscape features						
P005	Big Trees	1	100'+	Norway Spruce	<i>Picea abies</i>	N/A	
		2	80-100'+	Silver Maples	<i>Acer saccharinum</i>	N/A	
		1	80'+	Norway Maple	<i>Acer platanoides</i>	N/A	
	Small Trees	0					
	Shrubs	0					
	Perennials	0					
	Garden bedding						
	Other landscape features						
P021	Big Trees						
		1	80'+	Silver Maple	<i>Acer saccharinum</i>	N/A	
		2	80'+	Maple	<i>Acer ?</i>	N/A	
	Small Trees	0					
	Shrubs	0					
	Perennials	0					
	Garden bedding						
	Other landscape features						
P022	Big Trees	1	40'	Apple (Fruiting)	<i>Malus sylvestris</i>	Unknown, very old tree for a fruiting apple	
	Small Trees	3	8-10' (but wide, multileaders)	Arboretiae	<i>Thuja occidentalis</i>	Unknown	
	Shrubs		1	Hydrangea	<i>Hydrangea macrophylla</i>	Unknown	
	Perennials		clump	Iris	<i>Iris germanica</i>	Unknown. Flowers purple with yellow (see photo), falls (sepals) darker than standards (petals)	
	Garden bedding	16.5' x 19.5' vegetable garden (not currently in use) backyard by house.				Enclosed one side by house, 2 sides by stockade fence that enclosed yard, 4th side by old 4' metal fence on metal poles.	
	Other landscape features						
P023	Big Trees	0					
	Small Trees	0					
	Shrubs	0					
	Perennials	clump		Lilies	<i>Lilium hybrid</i>	Unknown	
	Garden bedding						
	Other landscape features						
P024	Big Trees	2	25'	Tree of Heaven	<i>Ailanthus altissima</i>	N/A	
		1	30'	Colorado Spruce	<i>Picea pungens</i>	Bluish tree, unlikely a cultivar but blue color	
	Small Trees						
	Shrubs	1		Lilac	<i>Syringa vulgaris</i>	N/A Typical lilac color and form	
	Perennials						
	Garden bedding						
	Other landscape features						
P025	Big Trees	1	80'+	Silver Maple	<i>Acer saccharinum</i>	N/A	
		1	40'	Silver Maple	<i>Acer saccharinum</i>	N/A	
		1	80'	Walnut	<i>Juglans nigra</i>	N/A	
		1	80'	Silver Maple	<i>Acer saccharinum</i>	N/A	
	Small Trees	0					
	Shrubs/Vines	1		Grape	<i>Vitis vinifera</i>	Unknown	
	Perennials	8 (approx)		Hosta	<i>Hosta sp.</i>	Green, Common type	
		multiple		Lily of the Valley	<i>Convallaria majalis</i>	White, typical.	
	Garden bedding						
P026	Other landscape features						
	Big Trees	4 (6?, see notes)	50-60'	Norway Maple	<i>Acer platanoides</i>	N/A	
		1	120'+	Silver Maple	<i>Acer saccharinum</i>	N/A	
		1		Sugar Maple	<i>Acer saccharum</i>	N/A	
		8	50-60'	Spruce	<i>Picea</i>	Unknown or N/A	
		8	Assorted	Tree of Heaven	<i>Ailanthus altissima</i>	N/A	
		8	Assorted	Slippery Elm	<i>Ulmus rubra</i>	N/A	
		8	Assorted	Honey Locust	<i>Gleditsia triacanthos inermis</i>	Unknown or N/A	
		8	Assorted	Norway Maple	<i>Acer platanoides</i>	N/A	
	Small Trees						
		1	15'	Walnut	<i>Juglans nigra</i>	N/A	

ARBOREAL SURVEY DATA FOR OU4 PROPERTIES
18 MILE CREEK SUPERFUND SITE
LOCKPORT, NY

Property		No.	~ height	Common Name	Species	Cultivar (if applicable) or other unique characteristics	Notes
		2	<6'	Dwarf Alberta Spruce	<i>Picea glauca</i> 'Conica'	Dwarf Alberta Spruce, 'Conica' very different from standard white spruce.	
		1	10'	Callery Pear	<i>Pyrus calleryana</i>	Unknown	
		1	8'	Crabapple	<i>Malus</i> spp.	Unknown	
		8 (multiple)	varies	Boxelder	<i>Acer negundo</i>	N/A	
	Shrubs	4	3-6'	Rose of Sharon	<i>Hibiscus syriacus</i>	Unkown but most likely N/A, mixed colors	
		1	3'	"Blue" (?) Holly	<i>Ilex x meservae</i>	Unknown	
		1	3'	Boxwood	<i>Buxus sempervirens</i>	Unknown	
	Perennials	3	4-6'	Forsythia	<i>Forsythia x intermedia</i>	Unknown	
		25+		Hosta	<i>Hosta</i> spp.	Numerous types, green and several different variegates.	
		2+		Peonies	<i>Paeonia</i> sp.	Unknown	
		Multiple		Variegated Vinca Vine	<i>Vinca major</i>	Common variegated cultivar (white edge on leaf)	
		Multiple		Ostrich Fern	<i>Matteuccia struthiopteris</i>	N/A	
	Garden bedding						
	Other landscape features						
P027	Big Trees						
	Small Trees	1	4'	Japanese Maple	<i>Acer japonica</i> cultivar	Red, fine-leaf weeping cultivar.	
		1	9'	Pear	<i>Pyrus</i> sp	Unknown	
		1	5-6'	Japanese Maple	<i>Acer japonica</i> cultivar	Red leaf upright cultivar	
		1	30'	Japanese Maple	<i>Acer japonica</i>	Green leaf, upright tree. May not be cultivar(?)	
		1	8'	Chinese Dogwood	<i>Cornus kousa</i>	Unknown	
	Shrubs	2	<3'	Dwarf Burning Bush	<i>Euonymus alatus</i> 'Compacta'	'Compacta' or similar dwarf cultivar	
		1	2'	Sweetspire	<i>Itea virginica</i>	'Little Henry'	
		2		Hydrangea	<i>Hydrangea</i> sp.	Unknown	
		1	3'	Rose of Sharon	<i>Hibiscus syriacus</i>	Unknown	
		3		Roses	<i>Rosa</i> hybrid	Unknown	
		1		Hydrangea	<i>Hydrangea</i> sp.	Unknown	
		2		Rose	<i>Rosa</i> hybrid	Unknown	
		1		Rose, Miniature	<i>Rosa</i> hybrid	Unknown Miniature	
		1		Summersweet	<i>Clethra alnifolia</i>	Unknown	
		2		?	?	Unidentified	
		2		Spiraea	<i>Spiraea japonica</i>	Gold leaf cultivar	
		1		Raspberry	<i>Rubus idaeus</i>	Unknown	
		1		Hydrangea	<i>Hydrangea</i> sp.	Unknown	
		1	5'	Dwarf Korean Lilac	<i>Syringa meyeri</i>	'Palibin' or similar dwarf cultivar	
		2	5'	Gold Arborvitae	<i>Thuja orientalis</i>	'Aurea Nana' or similar Golden cultivar	
	Perennials	1		Coreopsis	<i>Coreopsis</i> sp.	Unknown	
		1		Coreopsis/Tickseed	<i>Coreopsis lanceolata</i>	Unknown	
		1		Coreopsis	<i>Coreopsis verticillata</i>	'Moonbeam' or similar	
		1		Lungwort	<i>Pulmonaria officinalis</i>	Unknown	
		several		Tulips	<i>Tulipa x gesneriana</i> (or sp.)	Unknown, foliage dying down, number of plants also unknown	
		1		Coneflower	<i>Echinacea purpurea</i>	Unknown or N/A	
		1		Sedum	<i>Sedum</i> sp.	Unknown	
		1		Hosta	<i>Hosta</i> hybrid	Small, very blue leaf cultivar	
		1		Shasta Daisy	<i>Leucanthemum x superbum</i>	Unknown	
		1		Phlox	<i>Phlox paniculata</i>	Unknown	
		1		Liriope	<i>Liriope muscari</i>	Unknown	
		15		Tulips	<i>Tulipa x gesneriana</i> (or sp.)	Unknown	
		clump		Lily	<i>Lilium</i> sp./ hybrids	Unknown	
		1		Lungwort	<i>Pulmonaria officinalis</i>	Unknown	
		Numerous		Brown-eyed Susan	<i>Rudbeckia hirta</i>	N/A	
				Shasta Daisy	<i>Leucanthemum x superbum</i>	Unknown	
		3		Ornamental/Flowering Onion	<i>Allium</i> sp.	Unknown	
		Many		Sunflowers	<i>Helianthus annuus</i>	Unknown	
		1		Lungwort	<i>Pulmonaria officinalis</i>	Unknown	
		30		Lilies	<i>Lilium</i> sp./hybrids	Unknown	
		Group		Hens and Chicks	<i>Sempervivum</i>	Unknown	
		1		Coral Bells	<i>Heuchera</i>	Unknown	
		1		Silver Mound Artemesia	<i>Artemisia schmidtiana</i>	'Silver Mound'	
		1		Phlox	<i>Phlox paniculata</i>	Unknown	
		1		Oriental Poppy	<i>Papaver orientale</i>	Unknown	
		40+		Daylilies	<i>Heemerocalis</i>	Unknown	
		1		Maiden Grass	<i>Miscanthus</i>	Unknown	
		1		Lungwort	<i>Pulmonaria officinalis</i>	Unknown	
		5		Hosta	<i>Hosta</i> hybrid	Francis Williams', 'Blue Moon'(or similar), 'Gold Tiara', all-green and green w/white edge	
		1		Maiden Grass	<i>Miscanthus</i>	Unknown	
		1		Bleeding Heart	<i>Dicentra spectabilis</i>	Pink, Old Fashioned	
		2		Peonies	<i>Paeonia</i> hybrid	Unkown	
		5		Hosta	<i>Hosta</i> hybrid	large blue sieboldiana type	
		1		Pennstemon(?)		Unknown	
	Garden bedding	0				None.	
	Other landscape features					None.	
P028	Big Trees	1	80'+	Walnut	<i>Juglans nigra</i>	N/A	Backyard, sw corner at fenceline
	Small Trees						
	Shrubs	1	2'	Rhododendron	<i>Rhododendron catawbiense</i>	Small, recent planting at back of house, not thriving	
	Perennials	1	Large clump	Daylily	<i>Heemerocalis</i> sp.	Unknown, possibly common "Ditch Lily" H. fulva	By mailbox, near nw corner of house
	Garden bedding	0					
P029	Other landscape features					None.	
	Big Trees	1	100'+(?)	Maple (?.....missed ID)	<i>Acer?</i> Missed ID	N/A	Very large tree in SE quadrant, east side of driveway at fenceline. Missed ID, probably Maple(?)
		1	40'	Norway Spruce	<i>Picea abies</i>	N/A	Large tree in west southwest portion of backyard
		1	18'	Colorado Spruce	<i>Picea pungens</i>	N/A	Backyard, near center of west fence, southwest quadrant
		1	70'	Colorado Spruce	<i>Picea pungens</i>	N/A	Old large tree, southwest property along west fence.
	Small Trees	2	6-8'	Japanese Maples	<i>Acer japonica</i>	red leaf cultivar (Limbed up, more "tree" form)	large beautiful older tree, northwest corner of house (by back porch)
		1	25'	Japanese Maples	<i>Acer japonica</i>	red leaf cultivar	northwest corner of southwest quadrant (west of house)
		1	15'	Japanese Maples	<i>Acer japonica</i>	red leaf cultivar	east side of house at northeast corner
		2	8' (irregular, multihead)	Arborvitae	<i>Thuja occidentalis</i>	Unknown	Very large, bordering each side of steps off back porch (north side of house.
		2	approx 40'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	near northwest of house, southwest corner of BACK yard, 1 on west fenceline, 2 south fence of backyard.
		3	25'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	west side of house, southwest quadrant
		1	15'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	In a row, western fence in southwest bed.
		7	10' (vary slightly, 1 older)	Arborvitae	<i>Thuja occidentalis</i>	Unknown	South fence on west side yard. Probably volunteer (not planted)
		1	6'	Red Maple	<i>Acer rubrum</i>	Unknown	Planted in one of the Bathtubs near western fence
		1	1'	spruce	<i>Picea</i>	N/A	Dominant in SE corner of west side yard, near sw corner of house (by gate)
		1	5'	Dwarf Alberta Spruce	<i>Picea glauca</i>	'Conica'	
	Shrubs	1	3'	Rose	<i>Rosa</i> hybrid	Unknown	21' x 3' bed, center of backyard, north on property, just west of garage. Border of railroad ties, stone mulch.
		2	3'	"Blue Hollies"	<i>Ilex x meservae</i>	Unknown, "Blue Holly"	21' x 3' bed, center of backyard, north on property, just west of garage. Border of railroad ties, stone mulch.
		3	6'	Dwarf Lilac	<i>Syringa meyeri</i>	'Palibin' or similar	21' x 3' bed, center of backyard, north on property, just west of garage. Border of railroad ties, stone mulch.
		1	4'	Rose	<i>Rosa rugosa</i>	Rugosa or rugosa hybrid	southwest corner of backyard, near western fence.
		2	6'	Yew	<i>Taxus</i> sp.	Unknown or N/A	Northeast corner of west side yard, near northwest corner of house
		4	4, 3'	Yew	<i>Taxus</i> sp.	Unknown or N/A	2 southwest corner of west side yard, 2 along east side of west side yard (near sw corner of house)
		2	various to 6'	Lilacs	<i>Syringa vulgaris</i>	Unknown	East side of southwest side yard along west side of house
		3	4'	Dwarf Lilac	<i>Syringa meyeri</i>	'Palibin' or similar	southwest side yard along south fence.
		1	5'	Euonymous	<i>Euonymous japonicus</i>	Unknown	Southwest corner of west side yard
		3	N/A (killed back, grow quickly)	Butterfly Bush	<i>Buddleia davidii</i>	Unknown	Along west side of house
		2	4'	Spiraea	<i>Spiraea japonica</i>	Yellow leaf cultivar	Northwest corner of sideyard.
	Group			Juniper	<i>Juniperus chinensis pfitzeriana</i>	Gold Tip' or similar	Bed north/northwest portion of backyard, approximately 7' x 18' area
		1	6"	Candytuft	<i>Iberis sempervirens</i>	N/A	northwest corner of southwest side yard
		1	?	Boxwood	<i>Buxus</i> sp.	Along western edge of southwest side yard.	
	Perennials	Many		ily of the Valley	<i>Convallaria majalis</i>	N/A	Various, large group in southwest bed.

ARBOREAL SURVEY DATA FOR OU4 PROPERTIES
18 MILE CREEK SUPERFUND SITE
LOCKPORT, NY

Property		No.	~ height	Common Name	Species	Cultivar (if applicable) or other unique characteristics	Notes
		Many		Hostas	Hosta hybrids	Possibly 'Royal Standard' and other green leaf cultivars	Various locations, along west fence, along west side of house, around large tree on east side of driveway.
		Many		ferns	?, possibly Ostrich Fern	Various, particularly along western portion of southwest bed	
	Garden bedding						
		21' x 3' bed, center of backyard, north on property, just west of garage. Border of railroad ties, stone mulch.					
		southwest/west side yard (west of house) bordered on 4 sides by irregular flowerbeds, averaging about 100' x 3' (wider at corners). Stone border and stone mulch. Northwest corner has two levels of soil (step fashion) displaying a beautiful Japanese Maple at a higher level					
P030	Other landscape features						
		2 Bathtubs filled with soil, some statuary, primarily west of house					
	Big Trees	3	100'+	Silver Maple	Acer saccharinum	N/A	east and just west of broken concret patio in back of house, 3rd slightly smaller in northwest corner of yard, west of garage
		1	75'	Tree of Heaven	Ailanthus altissima	N/A	Western part of backyard, near western fenceline.
		1	80'	Walnut	Juglans nigra	N/A	northwest corner of yard, west of garage.
	Small Trees	0					
	Shrubs	0					
	Perennials	5 clumps		Hosta	Hosta	All green, probably Hosta undulata 'Erromena'	side and front bed.
		Several		Tulips	Tulipa x gesneriana	Colors/types unknown	west, side bed
	Garden bedding						
		3' circular bed ("lighthouse"), brick border, mulch, unplanted					
P031		Approximately 3' x 22' front bed, brick border, green Hosta					
		Approximately 18" (some places up to 1.5') x 43' on west side of house. Some mulch, rick border. Tulips and Hosta					
	Other landscape features						
	Big Trees	1	80'	Tree of Heaven	Ailanthus altissima	N/A	Back corner (northwest) of back yard.
		2	70'	Boxelder	Acer negundo	northwest corner of house and norwest yard, very large (for boxelders).	
		1	80' +	Tree of Heaven	Ailanthus altissima	Along East Fence, in flowerbed, ID missed, possibly Walnut(?)	
	Small Trees	0					
	Shrubs	0					
	Perennials	3		Hosta	Hosta hybrids	Big blue Sieboldiana type, 'Francis Williams', undulata mediovariegata	
	Garden bedding	0					
		Approximately 65' x 6' bed back right (east) fence of backyard, Northeast section of property. Weedy but some perennials (see above)					
P032	Other landscape features					None.	
	Big Trees	1	80'+	Silver Maple	Acer saccharinum	N/A	Large multitrunked tree, along east fence in backyard
	Small Trees	0					
	Shrubs	4	4'	Meadowsweet/ Spirea	Spiraea japonica	Unknown	26' x 7' bed on west side of house, front yard.
		1	4'	Weigela	Weigela hybrid(?)	Variegated cultivar	26' x 7' bed on west side of house, front yard.
		1	8'	Smoke Bush	Cotinus coggygia	Purple cultivar	Back of yard, close to middle
		1	8'	Rose	Rosa hybrid	Unknown	east side of backyard
		4	15'	Lilac	Syringa vulgaris	Double flowered cultivar	Back of yard
	Perennials	Several		Hosta	Hosta undulata 'Erromena'	Green, common Hosta	In weedy 4' x 34' bed in front of house (south side)
	Garden bedding	0					
	Other landscape features					None	
P033	Big Trees	1	80', thick trunk	Willow	Salix nigra(?)	N/A	Enormous old willow front yard side of house. SE Quadrant
		3	70'	Horsechestnuts	Aesculus hippocastanum	N/A	Large street trees along Chapel Street, front of house and side yard.
		10+ Numerous	varied to 8' +	Black Locust	Robinia pseudoacacia	N/A	Numerous locusts and walnuts throughout backyard, especially back right corner
		10+ Numerous	varied to 8' +	Honey Locust	Gleditsia triacanthos inermis	Thornless	Numerous locusts and walnuts throughout backyard, especially back right corner
		10+ Numerous	varied to 8' +	Walnut	Juglans nigra	N/A	Numerous locusts and walnuts throughout backyard, especially back right corner
		10+	varied mostly <20'	Mulberry	Morus alba	N/A	
	Small Trees	1	20'	Crabapple	Malus sp.	Unknown	Front of yard, right side by fenceline
		1	20'	Norway Maple	Acer platanoides	N/A	Side front yard, at property line, most likely volunteer.
		2	40'	Mulberry	Morus alba	N/A	At fenceline, behind framed garage. This is only area of yard with elevated Pb(?)
		1	25'	Japanese Maple	Acer japonicum	Red-leaf, upright cultivar	Along eastern edge of backyard, approximately 50' from house.
		1	30'	Norway Maple	Acer platanoides	N/A	Back center of yard
		1		Boxelder	Acer negundo	N/A	Possibly more than one, in mixed volunteer trees.
	Shrubs	2	8'	Forsythia	Forsythia x intermedia	N/A	Backyard, SE corner near gate to front yard
		2	8'	Lilac	Syringa vulgaris	Unknown	1 by porch, one in back yard
		10	4-10"	Rose-of-Sharon	Hibiscus syriacus	Unknown, most likely mixed colors, noncultivars	
	Perennials	Several clumps		Hens and Chicks	Sempervivum tectorum(?)	Unknown	Bed near back patio
		Large clump		Oriental Poppy	Papaver orientale	Unknown	
		Extensive groundcover		Bishops Weed	Aegopodium podagraria	"Variegatum"	
		8+		Hosta	Hosta sp.	Possibly 'Royal Standard' but unknown.	
	Garden bedding						
		6' x 20' bed side of house (SE). Two roses and variegated bishopweed groundcover. Brick edging					
		4' x approx. 66' bed front and other side of house with shrubs and bishop's weed groundcover. Brick edging					
		10' x 15' bed near back porch, black mulch, planted with bearded iris and a clump of lilies, brick edging					
		4' x 6' bed with Oriental poppies and Sempervivum ("Hens and Chicks"). Brick edging					
	Other landscape features						
		Flagpole near back step					
P034	Big Trees	1	100'+	Silver Maple	Acer saccharinum	N/A	Street tree front of house on North Adam St. (east side of property)
		1	100'+	Sugar(?) Maple	Acer saccharum(?)	N/A	Street tree front of house on North Adam St. (east side of property)
		1	60'	White Mulberry	Morus alba	N/A	South part of property, west of house by shed and south fenceline.
	Small Trees	3	4'	Dwarf Alberta Spruce	Picea glauca	Conical or similar	2 at front gate on north side of the house, one in backyard along north fenceline
	Shrubs	2	10'	Lilacs	Syringa vulgaris	Unknown, normal lilac flowers/color	Mulched bed back of yard (by west fence)
		1	8'	Doublefile Viburnum	Viburnum plicatum f. tomentosum	Doublefile cultivar unknown	Back right of back yard (northwest corner)
		6 (+?)	2-6'	Roses	Rosa hybrids	Cultivar/color(s) unknown	Scattered throughout front beds.
		1	4'	Blue Holly	Ilex x meservae	Unknown blue holly type	In bed near back gate (right side of house, north side of property)
		2	4'	Japanese Holly	Ilex crenata	Unknown	In bed near back gate (right side of house, north side of property)
	Perennials	many		Flowering Onions	Allium sp.	Unknown	Scattered throughout front beds.
		many		Tulips	Tulipa hybrids	Cultivar/color(s) unknown	Scattered throughout front beds.
		many		Phlox	Phlox paniculata	Cultivar/color(s) unknown	Scattered throughout front beds.
	Garden bedding						
		11' x 24' mulched bed with brick pavers in back.					
		4' x 12' and 3' x 12' beds in backyard, each side of paver approaching gate (side of house, north side of property)					
		Numerous small beds break up driveway and front yard. Once nicely planted though now weedy. Incl: 4' x 16' along sidewalk, 8' x 8' left of walkway (incl. lampost), 5' x 20' along porch, 5' x 12' front of house towards gate, 4' x 30' along fence, and 8' x 18'.					
	Other landscape features	1	10'+	Tree of Heaven	Ailanthus altissima	N/A	Backyard along north fenceline.
P035	Big Trees	1	30'	Slippery Elm	Ulmus rubra	N/A	Left of driveway, possibly neighbor's tree (?)
	Small Trees	4	30'+	Arborvitae	Thuja occidentalis	Unknown, N/A	Two along west side of house, old sparse trees, one maybe double trunk or two trees together. Two other trees at each corner of front of house (northeast quadrant)
		1	15-20'	Crabapple	Malus	Unknown, N/A	East quadrant, front of house, lawn tree.
	Shrubs	1		Burning Bush ?	?	Unknown species or cultivar (in backyard, only observed from distance)	Backyard
	Perennials	6		Hosta	Hosta hybrid	Unknown, probably Hosta undulata 'Erromena'	In front of windowsill
		1		Peony	Paeonia	Unknown	
	Garden bedding	0					
	Other landscape features					None.	
P036	Big Trees	2	100'+	Silver Maple	Acer saccharinum	N/A	Along Porter St. (south property border).
	Small Trees	0					
	Shrubs	1	1'	Miniature Rose	Rosa hybrid	Unknown	5' x 15' bed at front of house, lightly mulched. Decorative "bridges", 1 additional pot with flowers.
	Perennials	2		Hosta	Hosta undulata	Hosta undulata marginata (green with white edge)	5' x 15' bed at front of house, lightly mulched. Decorative "bridges", 1 additional pot with flowers.
		6		Hosta	Hosta hybrids	3 each of two yellow edged varieties, possibly fortunei aureomarginata and montana aureomarginata	1.5' x 21" By porch door, brick border.
		1		Bleeding Heart	Dicentra spectabilis	Species	1.5' x 21" By porch door, brick border.
		1		Blue Fountain Grass	Festuca glauca	Elijah Blue' or similar cultivar	1.5' x 21" By porch door, brick border.
	Garden bedding						
		5' x 15' bed at front of house, lightly mulched. Decorative "bridges", 1 additional pot with flowers.					
		1.5' x 21" By porch door, brick border.					
	Other landscape features					None.	
P037	Big Trees	1	75'	Norway Maple	Acer platanoides	N/A	Backyard, right of center (north side of backyard)
	Small Trees	0					
	Shrubs	4	5'	Roses	Rosa hybrids	Unknown cultivars	Front of house, 3 in middle bed, 1 in bed right of walkway (northeast corner)
	Perennials	1		Hosta	Hosta hybrid	Med/large green with yellow edge. "Aureomarginata"	2' x 5' bed front left of house foundation (southeast corner)
	Garden bedding						
		Beds in front (east) of house 2' x 10' (side), 2' x 10' (front, and 5' x 14' middle. Black landscape borders and mulch. Small 2' x 5' bed on left (southeast) side with one Hosta clump					

ARBOREAL SURVEY DATA FOR OU4 PROPERTIES
18 MILE CREEK SUPERFUND SITE
LOCKPORT, NY

Property		No.	~ height	Common Name	Species	Cultivar (if applicable) or other unique characteristics	Notes
P038	Other landscape features						None.
	Big Trees	1	75'	Tree of Heaven	<i>Ailanthus altissima</i>	N/A	Back center of backyard (western edge)
		1	65'	Norway Maple	<i>Acer platanoides</i>	N/A	Back left (southwest) corner of backyard
		2	60'	Walnut	<i>Juglans nigra</i>	N/A	Along left (south) backyard fence. 1 of the 2 very diseased.
		MANY	1'-30'	Norway Maples, Ailanthus, Walnuts		N/A	NUMEROUS volunteer trees along/though backyard fence, all sides.
	Small Trees	1	20'	Crabapple	<i>Malus</i> hybrid	Unknown	Landscape planting in center of backyard
	Shrubs	Many(25)'8'+		Privet Hedge	<i>Ligustrum vulgare</i>	N/A	25' planting along backyard, left (south) fenceline clost to house. Not recently maintained
	Perennials	> 10		German Bearded Iris	<i>Iris germanica</i>	Unknown. Plant in bud and looked like they may be purple	Bed in front of front porch
		>10		Lillies	<i>Lilium</i> hybrid	Unknown	Bed in front of front porch
		1		Hosta	<i>Hosta</i> hybrid	Northern Halo' or similar cultivar; large blue leaves with cream edge	Bed in front of front porch
		25+		Daylilies	<i>Heemerocallis</i>	Unknown. Given vigor and density probably <i>Heemerocallis fulva</i>	8' x 3' bed at back corner of house.
	Garden bedding						
				16' x 3' perennial bed, front of porch at front of house (east), bordered by black landscape barrier and freshly mulched (wood mulch)			
				Two x 2' x6' beds, mulched, on each side of front walkway (east), unplanted.			
	Other landscape features						
				shed, old block foundation (garage or shed)			
P039	Big Trees	1	80'	Spruce	<i>Picea</i>	Unknown	Old tree back right corner (northwest corner) of yard.
		1	100'	Silver Maple	<i>Acer saccharinum</i>	Unknown	Enormous old tree at street, southeast corner.
	Small Trees	0					
	Shrubs	2	8'	Ilacs	<i>Syringa vulgaris</i>	N/A	Back left back yard (southwest quadrant)
		2	8'	Rose of Sharon	<i>Hibiscus syriacus</i>	N/A	In front of house, southeast.
		2	8'	Rose of Sharon	<i>Hibiscus syriacus</i>	N/A	Right of driveway, near telephone pole.
		1	8'	Rose of Sharon	<i>Hibiscus syriacus</i>	N/A	Back left of back yard
		20+	3'-25'	Mixed volunteer shrubs and	<i>Acer, Hibiscus etc.</i>	N/A	Along left (south) side of property line volunteers including Rose of Sharon, Norway Maples, Privet etc.
	Perennials	0					
	Garden bedding	1					
	Other landscape features						None.
P040	Big Trees	0					
	Small Trees	10	4' to 14"	Arborvitaes	<i>Thuja occidentalis</i>	Unknown	Along western fenceline.
		1	5'? (not recorded)	Dwarf Alberta Spruce	<i>Picea glauca</i>	Conica'	Southwest quadrant near corner
		1	9'	Ornamental Plum	<i>Prunus cerasifera</i>	Unknown purple leaf cultivar	Center of lawn in southwest side yard
	Shrubs	1	4'	Rose of Sharon	<i>Hibiscus syriacus</i>	Unknown	Center of lawn in southwest side yard
		1	8'	snowball Viburnum	<i>Viburnum opulus</i>	Roseum' or similar double flowered cultivar.	Southwest corner of property.
		1	8'	Common Lilac	<i>Syringa vulgaris</i>	Unknown	In lawn near southwest corner of property.
	Perennials	1		Peony	<i>Paeonia</i> hybrid		
		1 clump		German Iris	<i>Iris germanica</i>	Dark Purple cultivar	Bed in southwest quadrant along south fence
		group		Sedum	<i>Hylotelephium herbstsfreude(?)</i>	Unknown	Nice little succulent clump, Bed in southwest quadrant along south fence.
		3 groups		Vinca Vine	<i>Vinca major</i>	Common Variegated (white edge) cultivar	Bed in southwest quadrant along south fence
		3 groups		German Iris	<i>Iris germanica</i>	Unknown two colors: Purple and Pale Ilac (almost white)	10' x 4' Bed under front window, by step, mulched.
		2 multiple		Forget Me Not	<i>Myosotis</i> sp.	Both pink and blue types.	10' x 4' Bed under front window, by step, mulched.
		1		Columbine	<i>Aquilegia</i> hybrid	Pink	10' x 4' Bed under front window, by step, mulched.
		2		Lupines	<i>Lupinus polyphyllus</i>	one blue, one purple	10' x 4' Bed under front window, by step, mulched.
		1		Bachelor Button	<i>Centaurea cyanus</i>	Note: Annual flower	Small 3' x 2' bed, side of steps, stone border with mulch.
		5		Daylilies	<i>Heemerocallis</i> hybrid	Unknown	by back step
		1		Lilly	<i>Lilium</i>	Unknown	by back step
		1		fern	<i>Matteuccia struthiopteris (?)</i>	Ostrich Fern (?)	by back step
	Garden bedding						
				8' x 9' vegetable garden on north side of house.			
				10' x 4' Bed under front window, by step, mulched.			
				Small 3' x 2' bed, side of steps, stone border with mulch.			
				Approximately 3' diameter mulched around Purple plum and Rose of Sharon in center of lawn, southwest quadrant.			
	Other landscape features						None.
P041	Big Trees	1	60'	Norway Maple	<i>Acer saccharinum</i>	N/A	Back right of yard, near western fenceline in back yard.
	Small Trees	0					
	Shrubs	1	2'	Spiraea	<i>Spiraea japonica</i>	Goldleaf cultivar	In front (north) of house, foundation planting
		1	3'	Dwarf Lilac	<i>Syringa meyeri</i>	Palibin' or similar cultivar	Northwest corner of house, in front of porch.
	Perennials	4		Hostas, mixed green and var	<i>Hosta undulata</i>	Most likely 'Erromena and mediovariegata'	In small walkway approximately 1.4 x 15' in front of house (north side)
	Garden bedding	0					
P042	Other landscape features						None.
	Big Trees		4'15'-25'	Mulberries	<i>Morus alba</i>	N/A	Most likely volunteers. 3 In west side yard, past garage, 1 in back of yard (south side)
			2'60'+	Norway Maples	<i>Acer platanoides</i>	N/A	At Street (north side of property) in front of house.
			2'80'+	Elm	<i>Ulmus rubra</i>	N/A	Back of yard.
			1'80'	Oak	<i>Quercus</i> sp.	Possibly English Oak (?), not positive on ID	Back of yard.
	Small Trees	15(?)	15'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	Approximately 50' hedgerow along back fence, behind house
			3'15'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	In a roughly 5' x 16' bed by back patio
			2'15'	Boxelder	<i>Acer negundo</i>	N/A	1 in side yard, 1 mixed with arborvitae (volunteer) behind house.
	Shrubs		3'6'	Burning Bushes	<i>Euonymous alata</i>	Unknown	Side of garage (west)
			1'8'	lilac	<i>Syringa vulgaris</i>	Unknown	Old clump back of yard.
	Perennials	0					
	Garden bedding	0					
	Other landscape features						
				Irregular shaped bed approximately 33' x 6' left of front steps continuing along east side of house, mulched but shrubs recently removed/cut			
				Irregular shaped bed approximately 22' x 5' right of front steps, mulched but shrubs recently removed/cut			
				5' x 50' Bed between sidewalk and sideyard (northern part of west side of house). Stone border.			
				Firepit			
P043	Big Trees	2	100'	Maples		N/A	Didn't record type in notes, two very old maples 1 probably silver, street trees along North Adam St.
	Small Trees	2	15'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	3' x 19' bed in front (north) of house, red stone mulch
		1	25'	Eastern Hemlock	<i>Tsuga canadensis</i>	N/A	Front of House (north quadrant), left of front walkway near Frost St.
	Shrubs	1	1'	Blue Carpet Juniper	<i>Juniperus horizontalis</i>	Wiltonil' or similar cultivar	3' x 19' bed in front (north) of house, red stone mulch
		2	1'	Variegated Euonymous	<i>Euonymous</i> sp.	Variegated	At corner of sidewalk and walkway, east side of house
		2	8'	Common Lilac	<i>Syringa vulgaris</i>	Unknown	lilac colored
		several	assorted	Rose of Sharon	<i>Hibiscus syriacus</i>	N/A	19' x 11' bed on side of garage, mixed with locusts and other seedlings.
		1	4'	Rose	<i>Rosa</i>	Unknown	
	Perennials	many		Hosta	<i>Hosta undulata</i>	Hosta undulata mediovariegata (white centered, green edge), and 'Erromena' (green)	3' x 19' bed in front (north) of house, 4' x 3' bed by front steps, along side of house and around birdbath
		3 clumps		Daylily	<i>Heemerocallis fulva</i> or hybrids	Unknown. Big clumps probably H. fulva	38' x 4' bed along east side of house, bordered by pavers
		many		Bishop's Weed	<i>Aegopodium podagraria 'Variegatum'</i>		
		1		Peony		Pink/red type	Front of house
	Garden bedding						
				3' x 19' bed in front (north) of side of house, red stone mulch			
				Two 3' x 3' beds on each side of walkway and sidewalk on east side of house.			
				38' x 4' bed along east side of house, bordered by pavers			
				Approximately 5' circle bed with birdbath and Hosta SE quadrant			
				19' x 11' bed on side of garage.			
	Other landscape features						None.
P045	Big Trees	2	100'+ (3' diam trunk)	Lindens	<i>Tilia</i> sp.	N/A	Very large/old street trees at North Adams, in front of house (southwest side of house)
		1	50'+	Locust	<i>Gleditsia</i>	N/A	Large trunk, poor health, at Dayton north/norwest
		2	80'	Silver Maples	<i>Acer saccharinum</i>	N/A	Center of property, in backyard.
		1	80'	Colorado Spruce	<i>Picea pungens</i>	most likely N/A	Green, old sparse tree
		5++	4'-60'	Norway Maple	<i>Acer platanoides</i>	5 large and multiple smaller Norway Maple volunteers along southeast fenceline.	
	Small Trees	1		Wisteria	<i>Wisteria</i> sp.	Unknown	Young plant
	Shrubs	2	15' (sic)	Ilacs	<i>Syringa vulgaris</i>	Unknown. Probably N/A regular ilacs	Tall old at North and northwest coreners of yard, within fence.
		40+(?)	5' (trimmed)	Privet	<i>Ligustrum</i>	110' linear feet, well maintained and trimmed along southwest property boundary (North Adam Street)	
		6	2'-5'	Roses	<i>Rosa</i>	Beds southeast of house	
	Perennials	3 large areas		Daylilies	<i>Heemerocallis</i>	Unknown. Due to density and age probably H. fulva	south corner of yard, along northwest side of house, and beside garage.

ARBOREAL SURVEY DATA FOR OU4 PROPERTIES
18 MILE CREEK SUPERFUND SITE
LOCKPORT, NY

Property		No.	~ height	Common Name	Species	Cultivar (if applicable) or other unique characteristics	Notes
		8(?) clumps		Oriental Poppies	<i>Papaver orientale</i>	Unknown	Beds southeast of house
		Several		Jily of the Valley	<i>Convallaria majalis</i>	Unknown or N/A	Beds southeast of house
		Several		Bee Balm	<i>Monarda sp.</i>	Unknown	Beds southeast of house
		Several		Spurge	<i>Euphorbia sp.</i>	Unknown	Beds southeast of house
		Clump		Jily	<i>Lilium</i>	Unknown	Beds southeast of house
		Several		Hosta	<i>Hosta</i> hybrids	Green, possibly 'Royal Standard'	Beds southeast of house
		Several		German Bearded Iris	<i>Iris germanica</i>	Unknown, at least some purple	Beds southeast of house
	Garden bedding	15' x 2' bed of daylilies south corner of property.					
		30' x 3' bed of daylilies along northwest side of house					
		6' x 4' bed of daylilies beside garage.					
		Approximately 70' (total) x 2.5' connected beds of mixed perennials and roses directly southeast of house.					
	Other landscape features						None.
P046	Big Trees	2	60'/40'	Norway Maple	<i>Acer platanoides</i>	Crimson King' or similar purple cultivar.	Nice older tree, larger in southeast front yard. 2nd tree west side of yard.
		1	30' high (45' WIDE)	Ornamental Cherry	<i>Prunus sp.</i>	Unknown cultivar	Beautiful wide tree, dominates section of west/southwest lawn.
		4	60-90'	Silver Maples	<i>Acer saccharinum</i>	N/A	4 trees almost paralleling fence/street on northwest border of property.
		1	80'	Tree of Heaven	<i>Ailanthus altissima</i>	N/A	Very large tree at northern fenceline
		1	35'	Colorado Spruce	<i>Picea pungens</i>	N/A	Nice blue color Colorado Spruce. West yard in center of lawn.
	Small Trees	1	6'	Callery Pear	<i>Pyrus calleryana</i>	Unknown	"Birdhouse" bed, north/center part of propertyh
		2	6'	Dwarf Alberta Spruce	<i>Picea glauca</i>	'Conica'	Gazebo bed
		1	8'	Weeping Flowering Cherry	<i>Prunus subhirtella</i>	Unknown small pendulous ("weeping") cultivar	Gazebo bed
		1	8'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	Bed Behind House
	Shrubs	1	10'	Ilac	<i>Syringa vulgaris</i>	Unknown	Near southwest corner of shed, north/central part of property
		1	4'	Forsythia	<i>Forsythia</i>	Unknown	Near Northeast corner of garage, near center of property.
		10	3'	Yews	<i>Taxus sp.</i>	Unknown	Neatly Trimmed. In beds in front (south) and west side of house.
		8	3'	Boxwood	<i>Buxus sp.</i>	Unknown	Neatly Trimmed. In beds in front (south) and west side of house.
		1	1.5'	Miniature Rose	<i>Rosa</i>	Unknown	Front bed by fence
		1	1.5'	Juniper	<i>Juniperus</i>	Unknown	Small plant on side by garage
		2	2'	Azalea (Evergreen)	<i>Rhododendron</i> hybrids	Red, Evergreen	Smaller, young plants. One on side of garage, 1 in gazebo bed
		4	3' diameter (pruned)	Carpet Juniper	<i>Juniperus horizontalis</i>	Unknown	Around Gazebo
		2	3' (pruned)	Gold edge Euonymous	<i>Euonymus japonicus</i>	'Aureo-marginatus'	Around Gazebo
	Perennials	Clump		Daffodils	<i>Narcissus</i> hybrid	Unknown	Front bed by fence
		3		Hostas	<i>Hosta</i> hybrid	2' Golden Tiara', 1 green unknown	Golden Tiara's by side of garage, green unknown in bed front of house.
		3		Hostas	<i>Hosta</i> hybrid	2 Blue cultivars, 1 blue with yellow edge cultivar	Bed on side of garage
		5		Carnation	<i>Dianthus</i>	Unknown	4 on bed side of garage, 1 in bed by front door
		1 clump		Hens and Chicks	<i>Semprevivum</i> hybrid	Unknown	bed on side of garage
		clump		Daylilies	<i>Heimeracallis</i>	Unknown	bed on side of garage
		multiple		Serman Bearded Iris	<i>Iris germanica</i>	Purple flowered cultivar	Bed on side of garage. Additional Iris back of shed, birdhouse bed, and bed behind house.
		multiple		Forget me not	<i>Myosotis sp.</i>	Unknown	bed on side of garage
		1		Bleeding Heart	<i>Dicentra spectabilis</i>	N/A	Flagpole bed.
		1		Hosta	<i>Hosta</i> hybrid	Rounded leaf with gold edge	Flagpole bed.
		Many		Brown-eyed Susan	<i>Rudbeckia hirta</i>	Unknown but unlikely.	Filling beds on each side of shed entrance.
		2		Hostas	<i>Hosta</i> hybrid	1 'Francis Williams', 1 'Guacamole'	Bed behind house
		1 clump		Daylily	<i>Heimeracallis</i>	Probably 'Stella D'Oro'	Bed behind house
		several		Jily of the Valley	<i>Convallaria majalis</i>	Unknown, probably N/A	Bed behind house
		1		Beardtongue (? ID not certa	<i>Penstemon</i> (?)	Unknown (several types and ID not certain)	Bed behind house
		1 group		Jilies	<i>Lilium</i> hybrid	Unknown	Bed behind house
	Garden bedding	Several mulched beds near front door (southeast corner of property) with trimmed yews and other shrubs/perennials. Include:					
		3' x 19' (by front door), 3' x 12' (right), 3', 5' (by fende), 3' x 9' (by fence), 3' x 20'					
		3' x 35' bed along left (west) side of house with yews, Hostas).					
		3' x 20' bed on side of garage with assorted perennials. Pine bark nugget mulch					
		6' Diameter circular bed, stone edge (no mulch) at flagpole, west part of property.					
		5' x 2.5' AND 4' x 3' beds on each side of shed door, north side of property (no edge or mulch on beds)					
		(10' x 20') + (24' x 6') circular bed around gazebo. Stone border in front of Gazebo and bed mulched.					
		10' x 28' Vegetable Garden (basically unplanted during survey). Eastern backyard near fenceline.					
		6' x 17' fed, stone border and pine bark mulch behind (north side of house)					
	Other landscape features						None.
P048	Big Trees	0					
	Small Trees	1	4'	Weeping Cherry Tree	<i>Prunus subhirtella</i>	Unknown. Smaller growing, pendulous ("weeping")	Specimen tree in front yard.
	Shrubs	2	2'	Hydrangeas	<i>Hydrangea sp.</i>	Unknown	Front bed by bay window
		1		Panicle Hydrangea	<i>Hydrangea paniculata</i>	Limelight'	By front step
		7		Rose of Sharons	<i>Hibiscus syriacus</i>	Unknown but a definite cultivar, more compact, possibly sterile.	Along fence back left of yard.
	Perennials	1		Ostrich Fern	<i>Matteuccia struthiopteris</i>	N/A	Front bed by bay window
		1	None.C487.C492	Bleeding Heart	<i>Dicentra spectabilis</i>	N/A Typical pink flowered	Front bed by bay window
		1		Bleeding Heart	<i>Dicentra spectabilis</i>	Gold Heart' yellow foliage	Front bed by bay window
		2		Hosta	<i>Hosta</i> hybrid	Francis Williams'	Front bed by bay window
		2		Hellebores	<i>Helleborus</i>	Unknown	Front bed by bay window
		1		Lavender	<i>Lavandula angustifolia</i>	Unknown	Front bed by bay window
		1		Baptisia	<i>Baptisia sp.</i>	Unknown (plant budded but blooms not yet open)	Front lawn by self, northeast part of lawn.
		2 clumps		Hosta	<i>Hosta</i> hybrid	Unknown green Hosta	Each side of walkway out front of house.
		Group		Variegated Bishop's Weed	<i>Aegopodium podagraria</i>	'Variegatum'	Area approximately 6' x 3' in back of yard.
	Garden bedding	5' x 5' Bed center of front lawn (northwest), bordered by rubber/plastic landscape barrier and mulched, containing weeping cherry tree.					
		16' x 4' bed in front of house (northwest) under front bay window. Rubber/plastic landscape barrier on edge and mulched. Shrubs and unusual perennials.					
		3' x 26' Bed in backyard by left (northeast) fence, covered in landscape fabric and mulched. Rose of Sharons (cultivar)					
	Other landscape features						None.
P049	Big Trees	0					
	Small Trees	0					
	Shrubs	2		Roses	<i>Rosa</i> hybrids	Unknown	Back left of yard near birdhouses.
		1	8'	Rose of Sharon	<i>Hibiscus syriacus</i>	Unknown	By Gazebo
	Perennials	Groundcover		Irish Moss (?)	<i>Sagina subulata</i>	N/A	Extensive in beds close to steps.
		2		Clematis	<i>Clematis</i>	Unknown, 1 a double-flowered purple cultivar	Back left (northeast) fence on large trellises.
		4		Jily	<i>Lilium</i>	Unknown	Back left (northeast) fence on large trellises.
		6		Coral Bells	<i>Heuchera</i>	Unknown purple leaf variety	Bed between shed and gazebo
		1		Columbine	<i>Aquilegia</i> hybrid	Unknown. Blue and white bicolor, long-spurred bype.	Bed between shed and gazebo
	Garden bedding	5.5' x 14' bed, west side of house just inside gate. Wood edge, red mulch. Potted plants and other decorative item on top.					
		Roughly 5.5' x 4' x 7' triangular bed west side of house, inside gate, opposite side. Wood edge, red mulch. Potted plants and décor on top.					
		7.5' x 8' bed by side steps (west side of house)					
		1'x11' bed also near steps, side of house.					
		Irregular approximately 4' x 9' bed at base of steps (wood border, red mulch, potted plants on top.					
		3' x 11' bed, back yard at house (southeast side of house)					
		3' x 11' bed back left (northeast border of back yard) red mulch, wood border, tall decorative birdhouses and trellises.					
		3' x 9' bed between shed and gazebo. Wood border, red mulch.					
		2.5' x 9' bed, wood border, red mulch. Back right (southeast) part of backyard. Potted plants and décor on top.					
		7' x 6' x 7' corner bed, back right (south corner) of back yard. Red mulch, wood border					
		4.5' x 3' bed, wood border and red mulch.					
P050	Other landscape features						None.
	Big Trees	0					
	Small Trees	2	10'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	3.5' x 14' bed in front of house.
	Shrubs	1	12'	Ilac	<i>Syringa vulgaris</i>	Unknown/unlikely (regular lilac color)	Back corner of yard
		1	3.5'	Rose	<i>Rosa</i> hybrid	Unknown	3.5' x 14' bed in front of house.
	Perennials	many		Variegated Bishop's Weed	<i>Aegopodium podagraria</i>	'Variegatum'	Back of yard
	Garden bedding						
P051		3.5' x 14' bed in front of house, scalloped stone landscape border and stone mulch					
		2' x 15' bed back of house.					
	Other landscape features						None.
	Big Trees	0					

ARBOREAL SURVEY DATA FOR OU4 PROPERTIES
18 MILE CREEK SUPERFUND SITE
LOCKPORT, NY

Property		No.	~ height	Common Name	Species	Cultivar (if applicable) or other unique characteristics	Notes
	Small Trees	3	3'	Arborvitae	<i>Thuja occidentalis</i>	Unknown	Bed in front of house.
	Shrubs	0					
	Perennials	0					
	Garden bedding	0					
	Other landscape features						None.